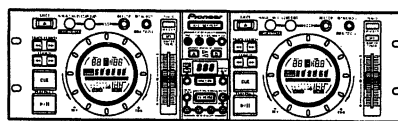
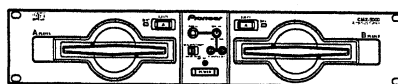


# Service Manual

Pioneer



CU-V160



CMX-5000

ORDER NO.  
RRV2260

COMPACT DISC PLAYER

# CMX-5000

REMOTE CONTROLLER

# CU-V160

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

| Type | Model    |         | Power Requirement | Remarks |
|------|----------|---------|-------------------|---------|
|      | CMX-5000 | CU-V160 |                   |         |
| KUC  | ○        | ○       | AC120V            |         |
| TL   | ○        | ○       | AC110-240V        |         |
| WY   | ○        | ○       | AC220-240V        |         |

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## 1. SAFETY INFORMATION

This service manual is intended for qualified service technicians ; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.

Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

### WARNING

This product contains lead in solder and certain electrical parts contain chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm.

Health & Safety Code Section 25249.6 – Proposition 65

### NOTICE

(FOR CANADIAN MODEL ONLY)

Fuse symbols  (fast operating fuse) and/or  (slow operating fuse) on PCB indicate that replacement parts must be of identical designation.

### REMARQUE

(POUR MODÈLE CANADIEN SEULEMENT)

Les symboles de fusible  (fusible de type rapide) et/ou  (fusible de type lent) sur CCI indiquent que les pièces de remplacement doivent avoir la même désignation.

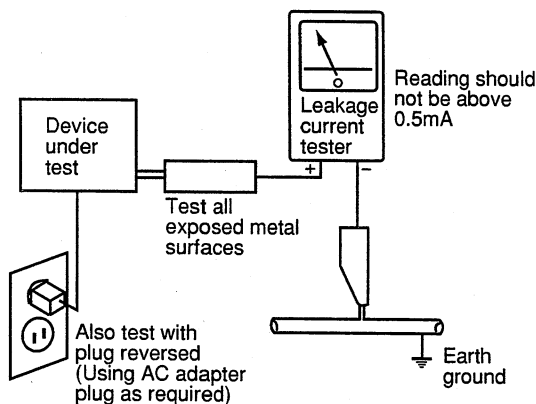
(FOR USA MODEL ONLY)

## 1. SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

### LEAKAGE CURRENT CHECK

Measure leakage current to a known earth ground (water pipe, conduit, etc.) by connecting a leakage current tester such as Simpson Model 229-2 or equivalent between the earth ground and all exposed metal parts of the appliance (input/output terminals, screwheads, metal overlays, control shaft, etc.). Plug the AC line cord of the appliance directly into a 120V AC 60Hz outlet and turn the AC power switch on. Any current measured must not exceed 0.5mA.



AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

## 2. PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in the appliance have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified by marking with a  $\Delta$  on the schematics and on the parts list in this Service Manual.

The use of a substitute replacement component which does not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, or other hazards.

Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

— IMPORTANT —

THIS PIONEER APPARATUS CONTAINS  
LASER OF CLASS 1.  
SERVICING OPERATION OF THE APPARATUS  
SHOULD BE DONE BY A SPECIALLY  
INSTRUCTED PERSON.

— LASER DIODE CHARACTERISTICS —

MAXIMUM OUTPUT POWER: 5 mW  
WAVELENGTH: 780 – 785 nm

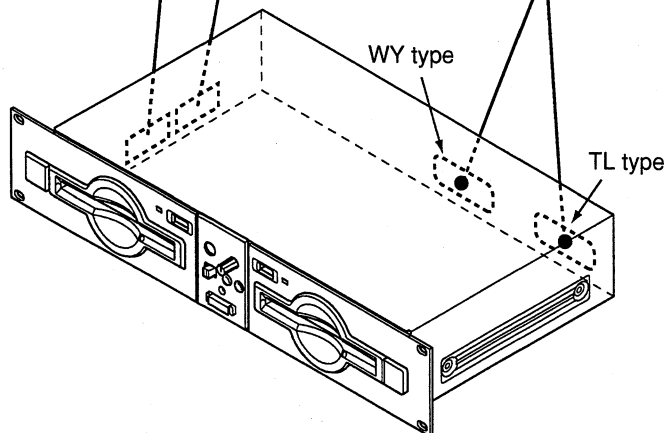
## LABEL CHECK (for WY and TL types)

**VARO!**  
Avattaessa ja suojalukitus ohitetta-  
essa olet alttiina näkymättömälle  
lasersäteilylle. Älä katso säteeseen.  
**VAROING!**  
Osynlig laserstrålning när denna del  
är öppnad och spärren är urkopplad.  
Betrakta ej strålen.  
VRW1297-A

**ADVARSEL**  
USYNLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHED SAF-  
BRYDERE ER UDE AF FUNKTION.  
UNDGÅ UDSÆTTELSE FOR STRÅLING.  
**VORSICHT!**  
UNSICHTBARE LASER-STRÄHLUNG TRIT AUS, WENN DECKEL  
(ODER KLAPPE) GEÖFFNET IST! NICHT DEM STRAHL AUSSETZEN!  
VRW1094

(Printed on the Rear Panel)

**CLASS 1  
LASER PRODUCT**



### Additional Laser Caution

#### 1. Laser Interlock Mechanism

The position of the switch (S1) for detecting loading completion is detected by the system microprocessor, and the design prevents laser diode oscillation when the switch is not in LPS1 terminal side (when the mechanism is not clamped and LPS1 signal is high level.) Thus, the interlock will no longer function if the switch is deliberately set to LPS1 terminal side. ( if LPS1 signal is low level ).

In the test mode\* the interlock mechanism will not function. Laser diode oscillation will continue, if pin 2 of AN8847SB (IC201) on the CDPB Assy is connected to GND, or pin 19 of IC201 (LDON) is connected to low level (ON), or else the terminals of Q201 are shorted to each other (fault condition).

#### 2. When the cover is opened, close viewing of the objective lens with the naked eye will cause exposure to a Class 1 laser beam.

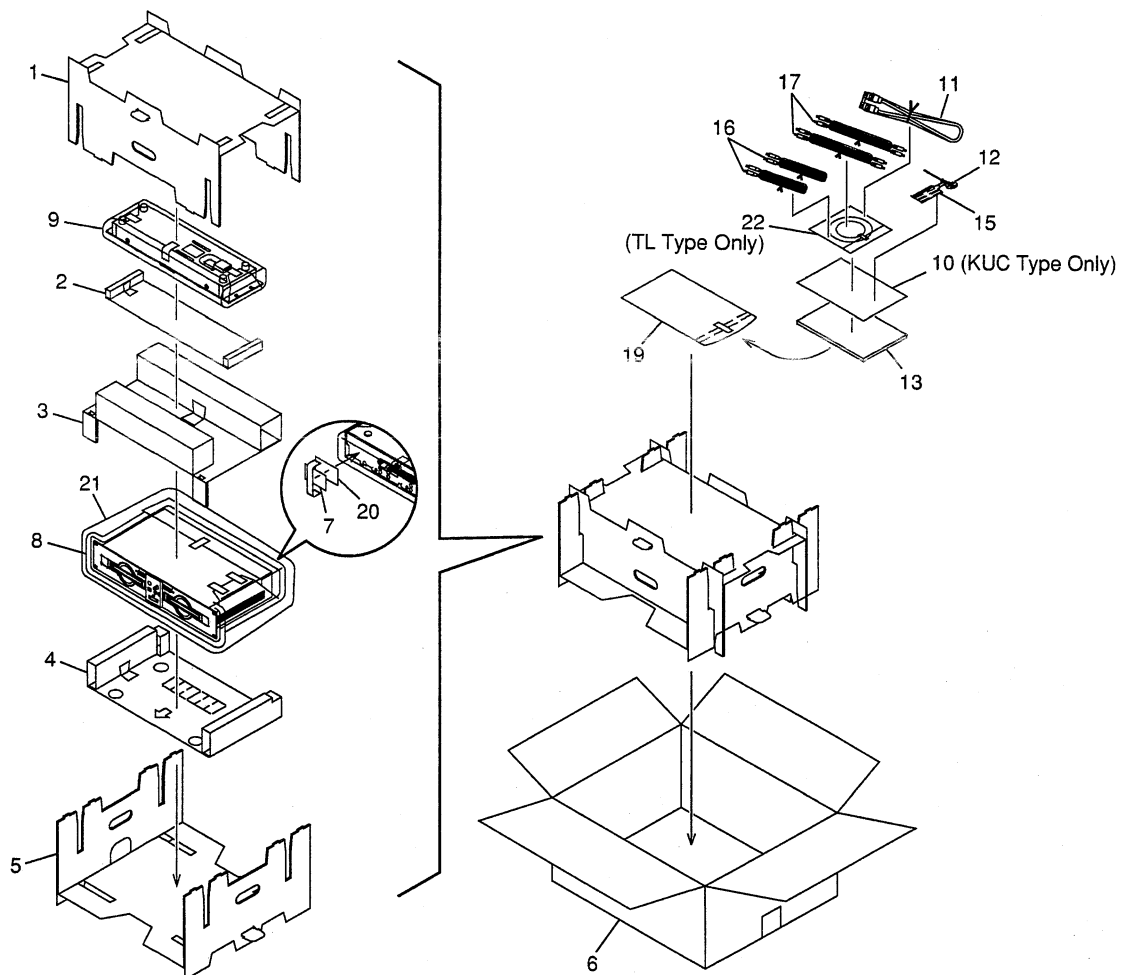
\* : Refer to page 69.

## CMX-5000, CU-V160

## 2. EXPLODED VIEWS AND PARTS LIST

NOTES: • Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.  
• The  $\Delta$  mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.  
• Screws adjacent to  $\blacktriangledown$  mark on the product are used for disassembly.

### 2.1 PACKING



## (1) PACKING PARTS LIST

| Mark | No. | Description                                               | Part No.               |
|------|-----|-----------------------------------------------------------|------------------------|
|      | 1   | Pad A                                                     | DHA1448                |
|      | 2   | Pad B                                                     | DHA1449                |
|      | 3   | Pad C                                                     | DHA1450                |
|      | 4   | Pad D                                                     | DHA1451                |
|      | 5   | Pad E                                                     | DHA1474                |
| NSP  | 6   | Packing Case                                              | See Contrast table (2) |
|      | 7   | Caution SG                                                | DRM1199                |
|      | 8   | Sheet                                                     | RHX1006                |
|      | 9   | Mirror Mat Sheet<br>(550 × 550 × 0.5)                     | Z23-026                |
| NSP  | 10  | Limited Warranty                                          | See Contrast table (2) |
|      | 11  | Specialized Connection Cable<br>for The Remote Controller | DDE1115                |
|      | 12  | Forced Ejection Pin                                       | DEX1013                |
|      | 13  | Operating Instructions                                    | See Contrast table (2) |
|      | 14  | .....                                                     |                        |
|      | 15  | Caution Tag AP                                            | DRW1897                |
|      | 16  | Control Cord                                              | PDE1247                |
|      | 17  | Audio Cable (L=1.5m)                                      | VDE1033                |
|      | 18  | .....                                                     |                        |
|      | 19  | Polyethylene Bag<br>(0.03 × 230 × 340)                    | Z21-038                |
| NSP  | 20  | Silica Gel                                                | AEN7001                |
| NSP  | 21  | Polyethylene Bag                                          | AHG7047                |
|      | 22  | Adaptor for 8cm discs                                     | See Contrast table (2) |

## (2) CONTRAST TABLE

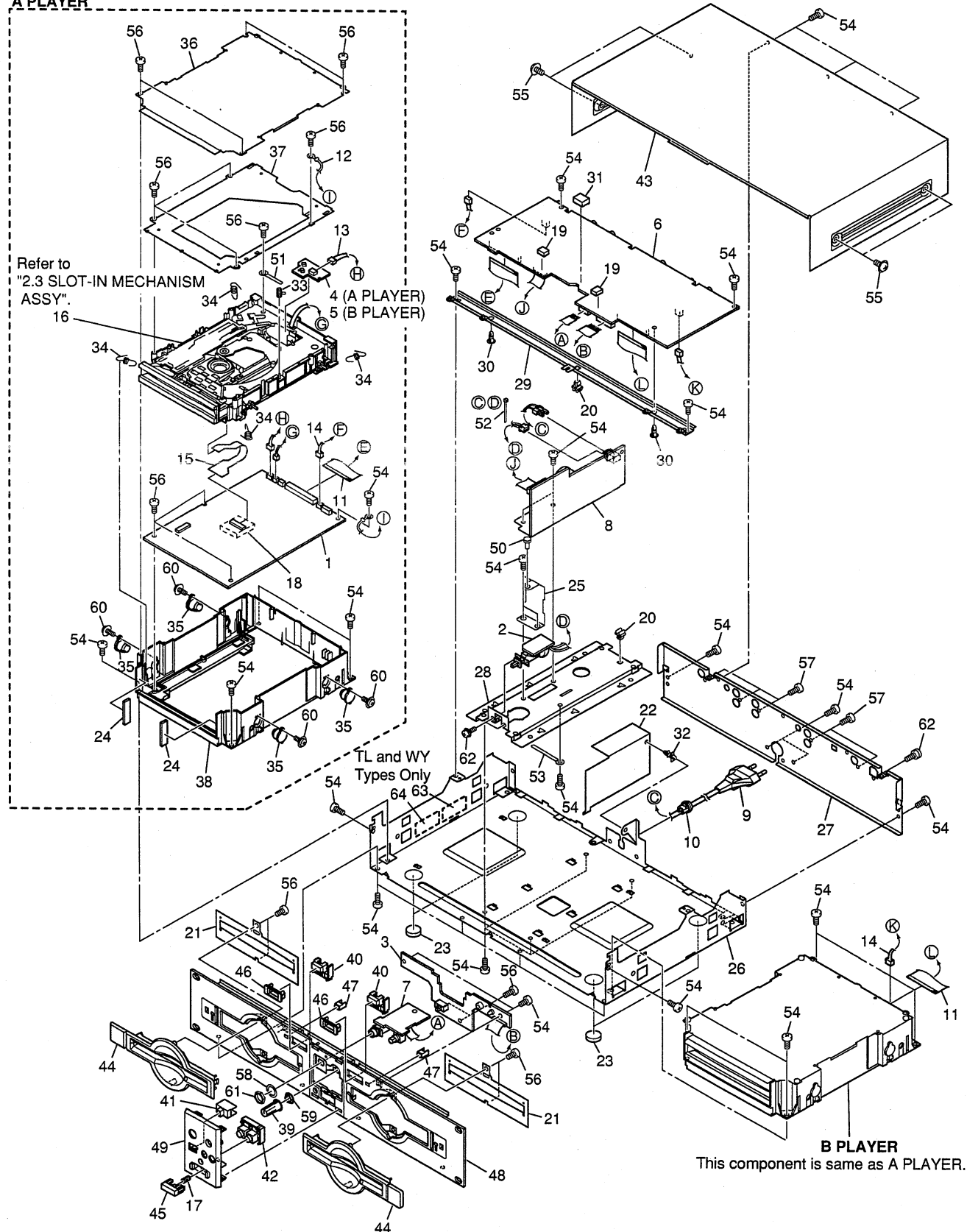
CMX-5000/KUC, TL and WY are constructed the same except for the following :

| Mark | No. | Symbol and Description                                                  | Part No. |          |          | Remarks |
|------|-----|-------------------------------------------------------------------------|----------|----------|----------|---------|
|      |     |                                                                         | KUC Type | TL Type  | WY Type  |         |
| NSP  | 6   | Packing Case                                                            | DHG1961  | DHG1960  | DHG1953  |         |
|      | 10  | Limited Warranty                                                        | ARY7043  | Not used | Not used |         |
|      | 13  | Operating Instructions (English)                                        | DRB1254  | Not used | Not used |         |
|      | 13  | Operating Instructions (English/Spanish/Chinese)                        | Not used | DRB1256  | Not used |         |
|      | 13  | Operating Instructions<br>(English/French/German/Italian/Dutch/Spanish) | Not used | Not used | DRB1255  |         |
|      | 22  | Adaptor for 8cm discs                                                   | Not used | DEX1012  | Not used |         |

# CMX-5000, CU-V160

## 2.2 EXTERIOR

### A PLAYER



## (1) EXTERIOR PARTS LIST

| Mark | No. | Description            | Part No.               | Mark | No. | Description           | Part No.               |
|------|-----|------------------------|------------------------|------|-----|-----------------------|------------------------|
|      | 1   | CDPB ASSY              | DWG1540                | NSP  | 31  | Spacer                | VEC1585                |
|      | 2   | PSWB ASSY              | DWS1301                |      | 32  | PCB Spacer            | VEC2077                |
|      | 3   | SELB ASSY              | DWS1302                |      | 33  | Earth Spring          | DBH1398                |
|      | 4   | SLM1 ASSY              | DWS1303                |      | 34  | Float Spring          | DBH1428                |
|      | 5   | SLM2 ASSY              | DWS1304                |      | 35  | Damper                | DEC2236                |
|      | 6   | TRMB ASSY              | DWX2066                |      | 36  | Cover A               | DNF1636                |
|      | 7   | HPJB ASSY              | DWX2067                |      | 37  | Mecha Holder          | DNH2339                |
| △    | 8   | SW POWER SUPPLY ASSY   | DWR1330                |      | 38  | Damper Stay           | DNK3751                |
| △    | 9   | AC Power Cord          | See Contrast table (2) |      | 39  | VR Knob               | DAA1145                |
|      | 10  | Strain Relief          | See Contrast table (2) |      | 40  | Eject Knob            | DAC1924                |
|      | 11  | 37P F•F•C/60V          | DDD1159                |      | 41  | Slide SW Knob         | DAC1926                |
|      | 12  | Earth Lead Unit        | DDF1010                |      | 42  | Monitor Select Knob   | DAC1939                |
|      | 13  | SL Connecto Assy 3P    | DKP3403                |      | 43  | Bonnet                | DNE1382                |
|      | 14  | Connector Assy 3P      | DKP3514                |      | 44  | Front Bezel           | DNK3724                |
|      | 15  | S Flexible Cable       | DNP1748                |      | 45  | Power Knob            | DNK3725                |
| NSP  | 16  | Slot-in Mechanism Assy | DXA1845                |      | 46  | Eject Guide           | DNK3727                |
|      | 17  | Power Knob Spring      | DBH1469                |      | 47  | Disc Indicator        | DNK3729                |
|      | 18  | Silicon Seat           | DEB1449                |      | 48  | Front Panel Assy      | DXB1729                |
|      | 19  | Rubber Spacer          | DEB1455                |      | 49  | Function Panel Assy   | DXB1732                |
|      | 20  | PCB Holder             | DEC1231                |      | 50  | Nylon Rivet (3 × 4.5) | RBM-003                |
|      | 21  | Bezel Sheet            | DEC2346                |      | 51  | Cord Clamper          | RNH-184                |
|      | 22  | Power Supply Cover     | DEC2347                |      | 52  | Binder                | ZCA-SKB90BK            |
|      | 23  | Insulator              | DEC2348                | NSP  | 53  | Cord Stopper          | ZCB-069Z               |
|      | 24  | Bezel Cushion C        | DEC2350                |      | 54  | Screw                 | BBZ30P060FZK           |
|      | 25  | Power Supply Shield    | DEC2391                |      | 55  | Screw                 | BBZ40P060FZK           |
| NSP  | 26  | Chassis                | DNA1253                |      | 56  | Screw                 | BPZ30P080FMC           |
|      | 27  | Rear Panel             | See Contrast table (2) |      | 57  | Screw                 | BPZ30P080FZK           |
|      | 28  | Power Supply Plate     | DNF1637                |      | 58  | Washer                | DBE1010                |
|      | 29  | PCB Frame              | DNH2446                |      | 59  | Flange Nut            | DBN1004                |
| NSP  | 30  | PCB Holder             | PNW1861                |      | 60  | Screw                 | IPZ20P080FMC           |
|      |     |                        |                        |      | 61  | Nut                   | NKX2FUC                |
|      |     |                        |                        |      | 62  | Screw                 | PMH30P060FMC           |
|      |     |                        |                        |      | 63  | Caution Label         | See Contrast table (2) |
|      |     |                        |                        | NSP  | 64  | Caution Label HE      | See Contrast table (2) |

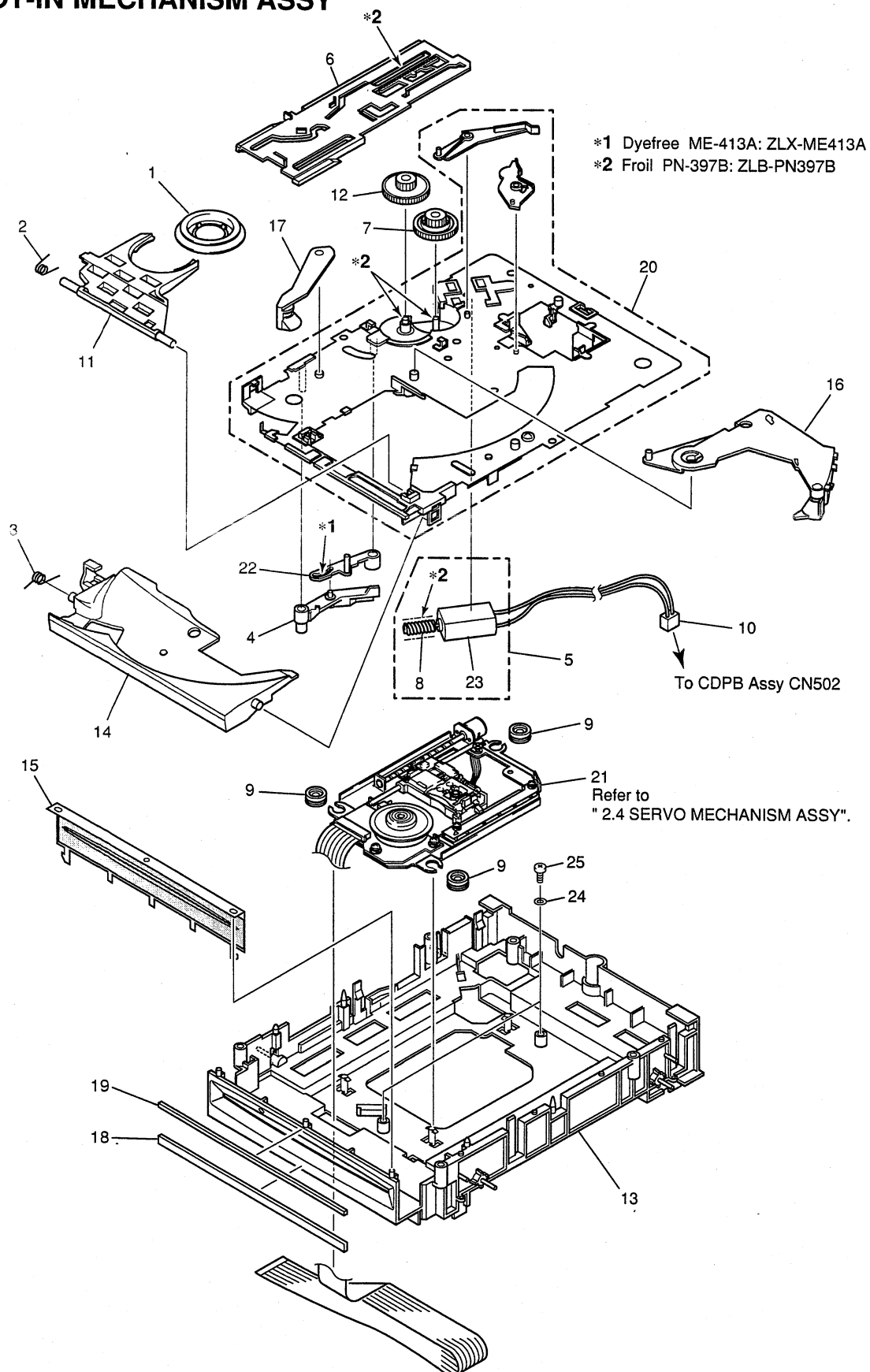
## (2) CONTRAST TABLE

CMX-5000/KUC, TL and WY are constructed the same except for the following :

| Mark | No. | Symbol and Description | Part No. |         |         | Remarks |
|------|-----|------------------------|----------|---------|---------|---------|
|      |     |                        | KUC Type | TL Type | WY Type |         |
| △    | 9   | AC Power Cord          | ADG7024  | VDG1061 | VDG1061 |         |
|      | 10  | Strain Relief          | CM-22C   | CM-22B  | CM-22B  |         |
|      | 27  | Rear Panel             | DNC1520  | DNC1519 | DNC1516 |         |
|      | 63  | Caution Label          | Not used | VRW1094 | VRW1094 |         |
| NSP  | 64  | Caution Label HE       | Not used | VRW1297 | VRW1297 |         |

## CMX-5000, CU-V160

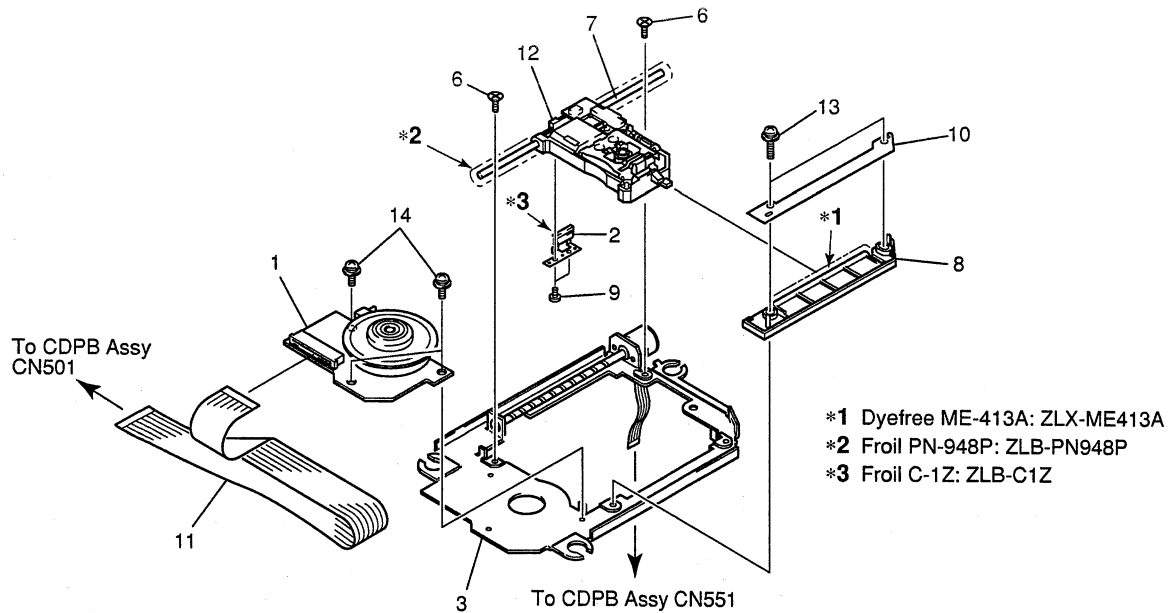
### 2.3 SLOT-IN MECHANISM ASSY



● SLOT-IN MECHANISM ASSY PARTS LIST

| Mark | No. | Description          | Part No.   | Mark | No. | Description          | Part No.     |
|------|-----|----------------------|------------|------|-----|----------------------|--------------|
|      | 1   | Clamper Assy         | DXA1821    |      | 11  | Clamp Arm            | DNK3404      |
|      | 2   | Clamp Spring         | DBH1374    |      | 12  | Drive Gear           | DNK3565      |
|      | 3   | Guide Spring         | DBH1375    |      | 13  | Float Base Assy      | DXB1683      |
|      | 4   | Lever B              | DNK3558    |      | 14  | Disc Guide           | DNK3478      |
|      | 5   | Loading Motor Assy-S | DEA1008    |      | 15  | Front Sheet          | DED1132      |
|      | 6   | Main Cam             | DNK3407    |      | 16  | Eject Lever          | DNK3684      |
| NSP  | 7   | Loading Gear         | DNK3409    |      | 17  | Loading Lever        | DNK3406      |
|      | 8   | Worm Gear            | DNK3410    |      | 18  | Bezel Cushion A      | DEC2257      |
|      | 9   | Mount Bush           | DEB1328    |      | 19  | Bezel Cushion B      | DEC2258      |
|      | 10  | Connector Assy       | PF02PY-B27 | NSP  | 20  | Loading Base         | DNK3637      |
|      |     |                      |            |      | 21  | Servo Mechanism Assy | DXB1684      |
|      |     |                      |            |      | 22  | Lever A              | DNK3564      |
|      |     |                      |            | NSP  | 23  | Loading Motor        | DXM1093      |
|      |     |                      |            |      | 24  | PC Washer            | DEC2332      |
|      |     |                      |            |      | 25  | Screw                | BPZ30P080FZK |

2.4 SERVO MECHANISM ASSY



● SERVO MECHANISM ASSY PARTS LIST

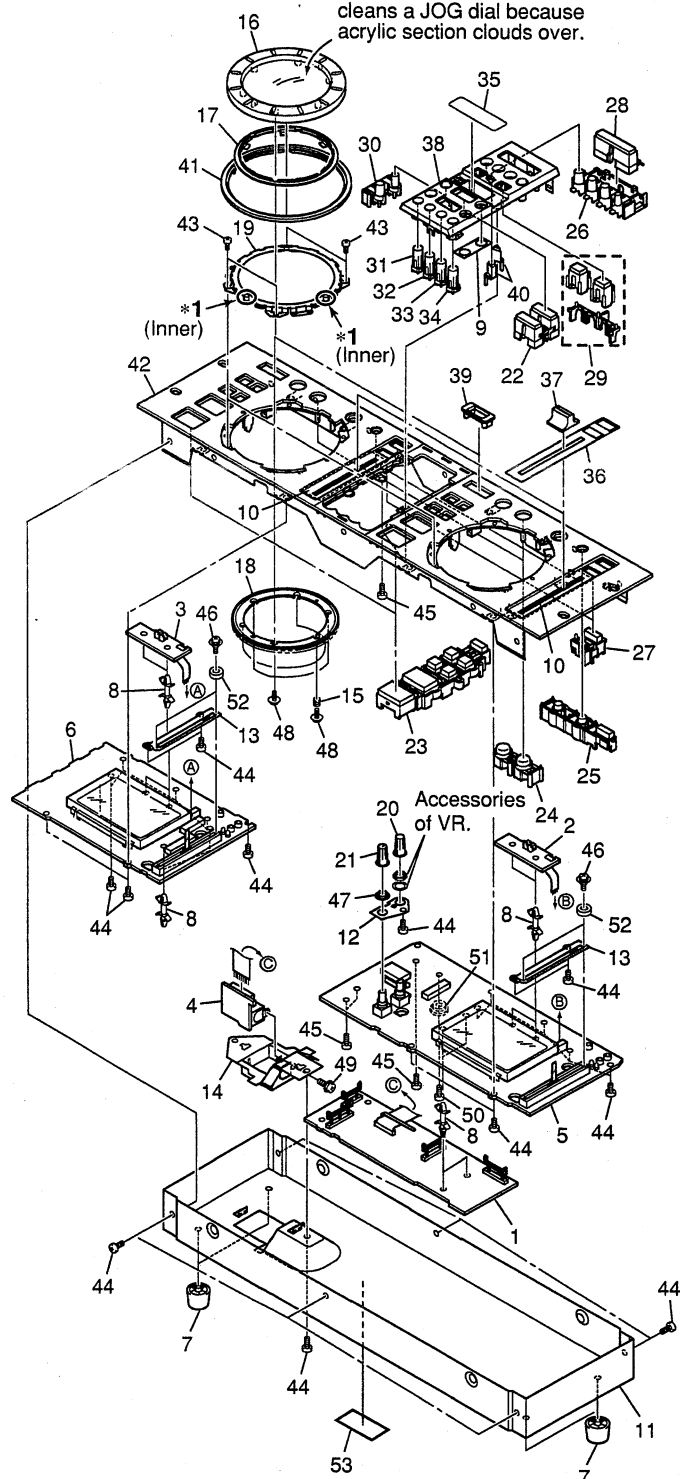
| Mark | No. | Description       | Part No.     | Mark | No. | Description | Part No.     |
|------|-----|-------------------|--------------|------|-----|-------------|--------------|
|      | 1   | Spindle Motor     | DXM1122      |      | 11  | SPD Card    | DDX1165      |
|      | 2   | Screw Guide       | DNK3238      | NSP  | 12  | Pickup Assy | DWY1069      |
|      | 3   | Pulse Motor Frame | DXM1125      |      | 13  | Screw       | PMA20P080FMC |
|      | 4   | .....             |              |      | 14  | Screw       | PMH20P040FMC |
|      | 5   | .....             |              |      |     |             |              |
|      | 6   | Screw             | CMZ20P060FMC |      |     |             |              |
|      | 7   | Guide Shaft       | DLA1731      |      |     |             |              |
|      | 8   | Sub Guide Shaft   | DNK3638      |      |     |             |              |
|      | 9   | Screw             | ABA7022      |      |     |             |              |
|      | 10  | Stopper           | DNH2355      |      |     |             |              |

# CMX-5000, CU-V160

## 2.5 REMOTE CONTROLLER (CU-V160)

\*1 Grease PN-92KB  
Check that the JOG dial moves smoothly after a small quantity put grease on.

Do not use the alcohol when cleans a JOG dial because acrylic section clouds over.



### (1) REMOTE CONTROLLER (CU-V160) PARTS LIST

| Mark | No. | Description        | Part No.               |
|------|-----|--------------------|------------------------|
|      | 1   | CNNB ASSY          | DWG1534                |
|      | 2   | PHT1 ASSY          | DWG1535                |
|      | 3   | PHT2 ASSY          | DWG1536                |
|      | 4   | CTJB ASSY          | DWG1537                |
|      | 5   | FLK1 ASSY          | DWG1538                |
|      | 6   | FLK2 ASSY          | DWG1539                |
|      | 7   | Foot Assy          | AEC1531                |
|      | 8   | PCB Spacer (10)    | DEC1388                |
|      | 9   | Rotary VR Packing  | DED1151                |
|      | 10  | Slide VR Packing   | DED1154                |
|      | 11  | Cover              | DNE1383                |
|      | 12  | VR Stay            | DNF1635                |
|      | 13  | VR Holder          | DNF1638                |
|      | 14  | Terminal Holder    | DNH2448                |
|      | 15  | Jog Spring         | DBH1460                |
|      | 16  | Jog Dial           | DNK3797                |
|      | 17  | J Ring A           | DNK3723                |
|      | 18  | J Ring B           | DNK3732                |
|      | 19  | Jog Stay Assy      | DXB1727                |
|      | 20  | BPM Knob           | DAA1144                |
|      | 21  | VR Knob            | DAA1145                |
|      | 22  | BPM Knob           | DAC1925                |
|      | 23  | Knob (PLAY)        | DAC1927                |
|      | 24  | Knob (LOOP)        | DAC1928                |
|      | 25  | Knob (TEMPO)       | DAC1929                |
|      | 26  | Mode Select Knob   | DAC1930                |
|      | 27  | MT Knob            | DAC1931                |
|      | 28  | MIX Knob           | DAC1932                |
|      | 29  | Player Select Knob | DAC1933                |
|      | 30  | Start Knob         | DAC1934                |
|      | 31  | Knob A             | DAC1935                |
|      | 32  | Knob B             | DAC1936                |
|      | 33  | Knob C             | DAC1937                |
|      | 34  | Knob D             | DAC1938                |
|      | 35  | Display Plate      | DAH1937                |
|      | 36  | Slide Sheet        | DAH1938                |
|      | 37  | Slide Knob         | DNK2936                |
|      | 38  | Function Panel (C) | DNK3726                |
|      | 39  | Eject Guide        | DNK3727                |
|      | 40  | Lens               | DNK3730                |
|      | 41  | Jog Guard          | DNK3731                |
|      | 42  | Control Panel Assy | DXB1728                |
|      | 43  | Screw              | BBZ26P060FMC           |
|      | 44  | Screw              | BBZ30P060FZK           |
|      | 45  | Screw              | BPZ30P080FMC           |
|      | 46  | Screw              | PMB20P060FMC           |
|      | 47  | Flange Nut M9      | DBN1004                |
|      | 48  | Screw              | PBA1062                |
|      | 49  | Screw              | PMH30P060FMC           |
|      | 50  | Screw              | BPZ30P120FCU           |
|      | 51  | POM Bush           | DEC2397                |
|      | 52  | Spacer             | DLA1801                |
|      | 53  | Label              | See Contrast table (2) |

## CMX-5000, CU-V160

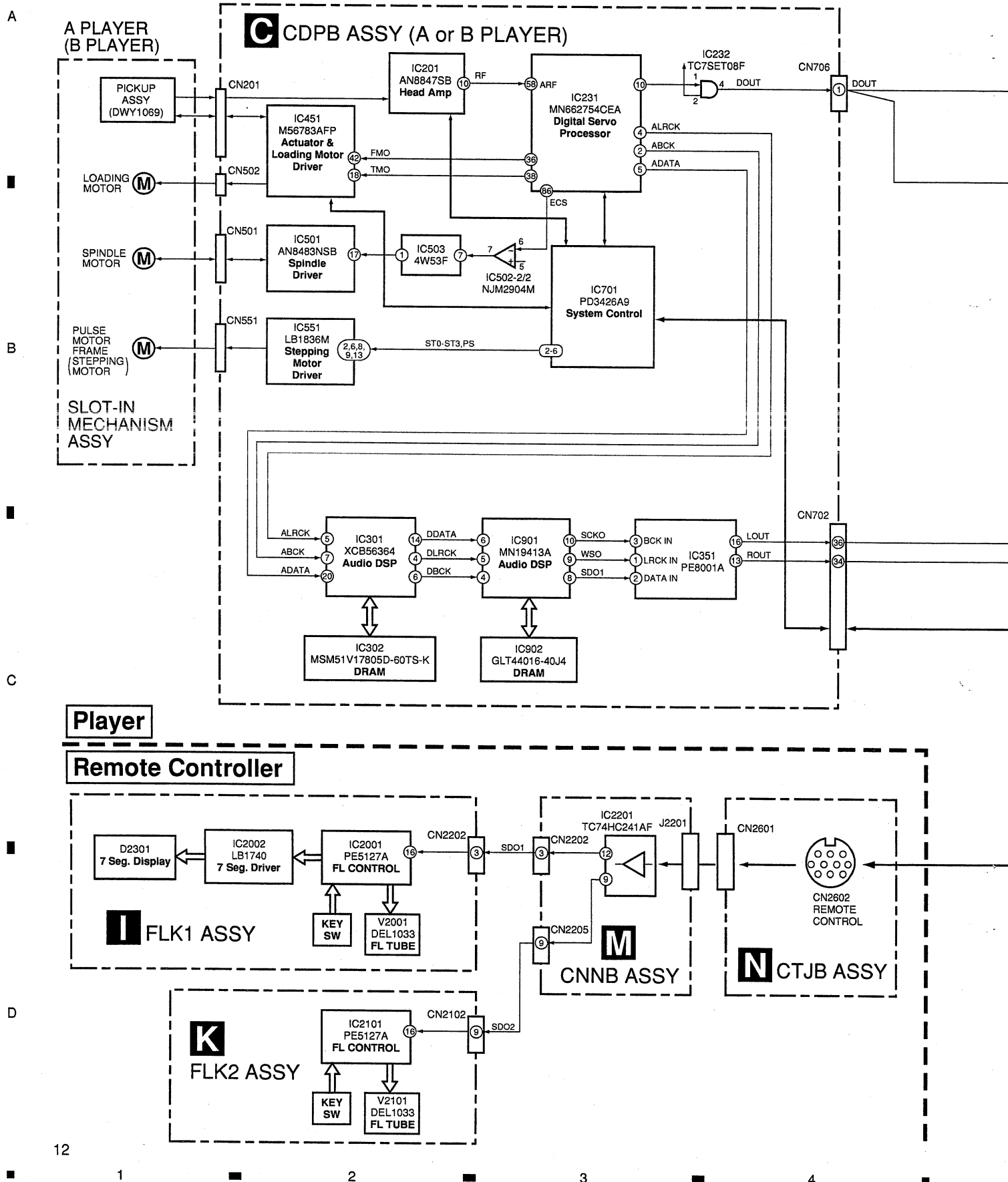
### (2) CONTRAST TABLE

CMX-5000/KUC, TL and WY are constructed the same except for the following :

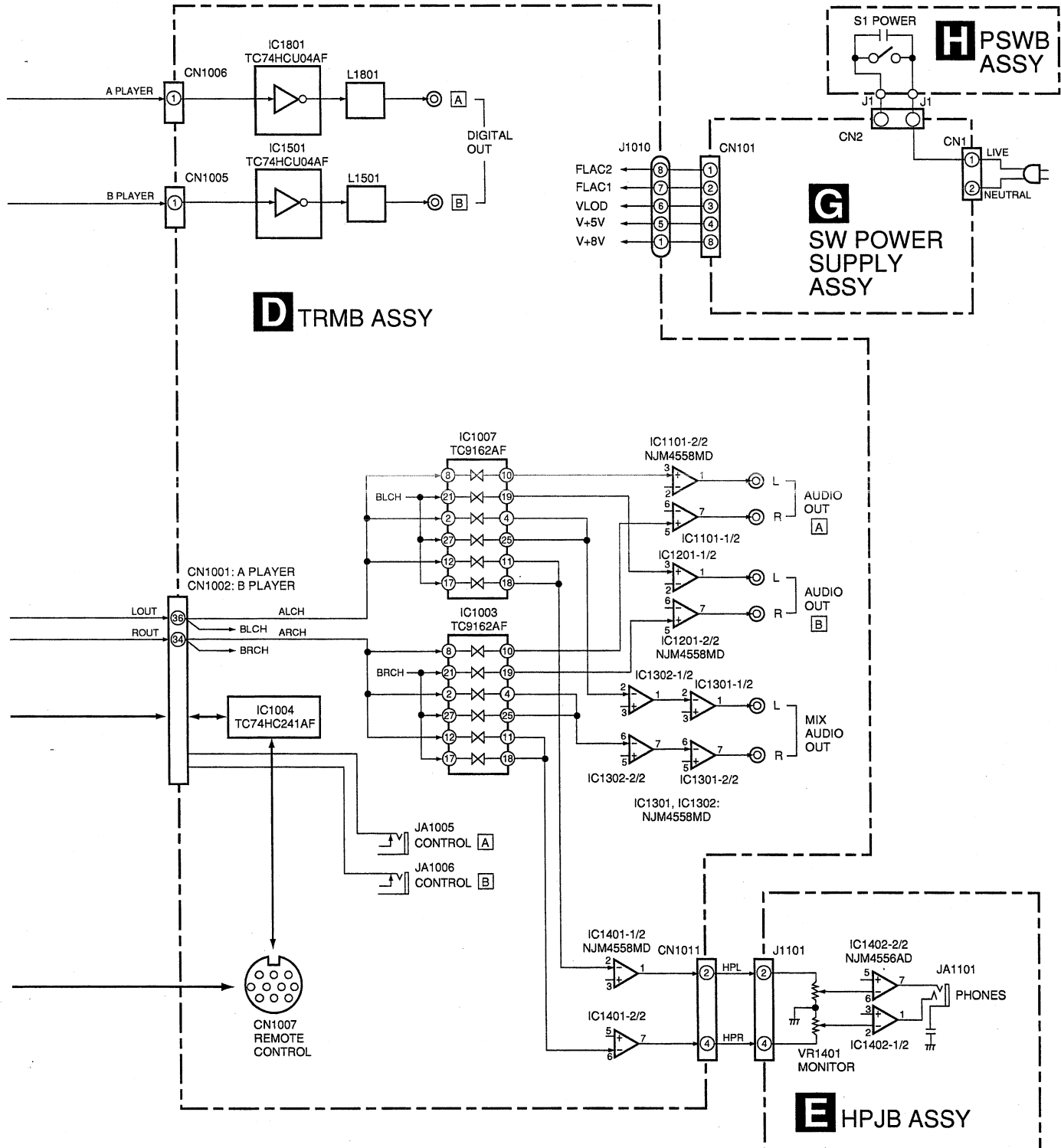
| Mark | No. | Symbol and Description | Part No. |         |         | Remarks |
|------|-----|------------------------|----------|---------|---------|---------|
|      |     |                        | KUC Type | TL Type | WY Type |         |
|      | 53  | Label                  | DAL1134  | DAL1134 | DAL1135 |         |

## 3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

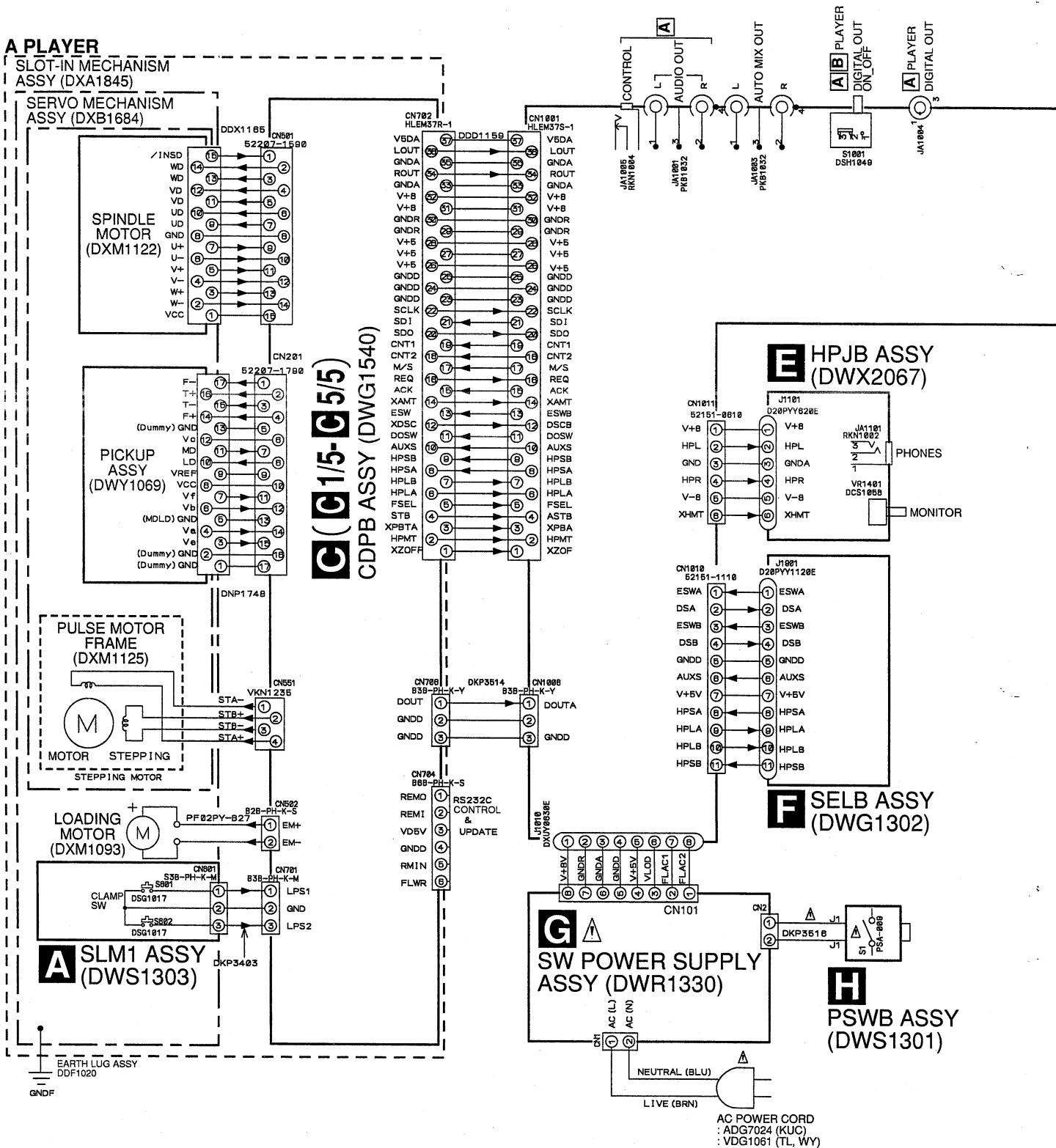
### 3.1 BLOCK DIAGRAM



## CMX-5000, CU-V160

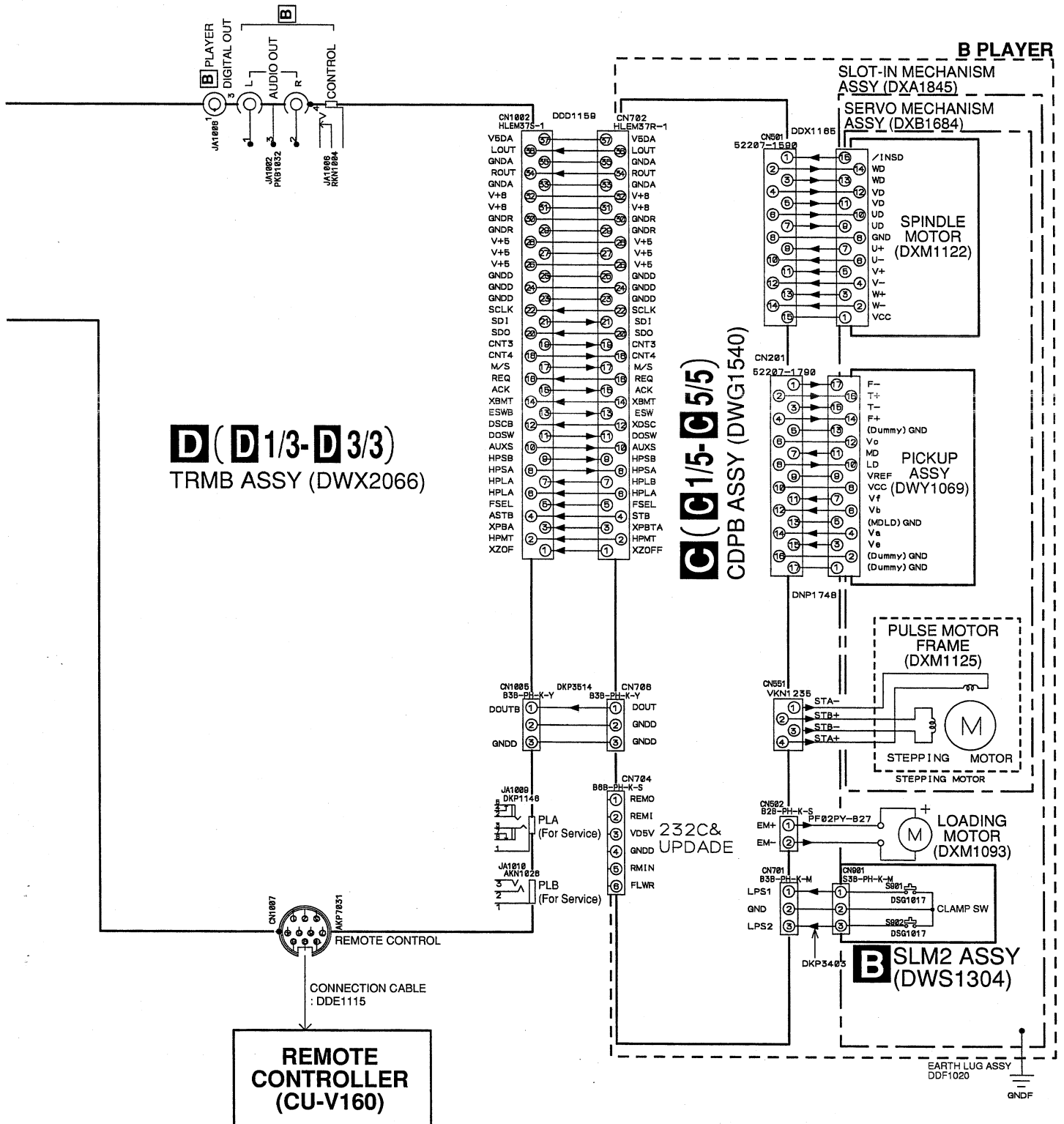


### 3.2 OVERALL WIRING DIAGRAM, SLM1 and SLM2 ASSYS



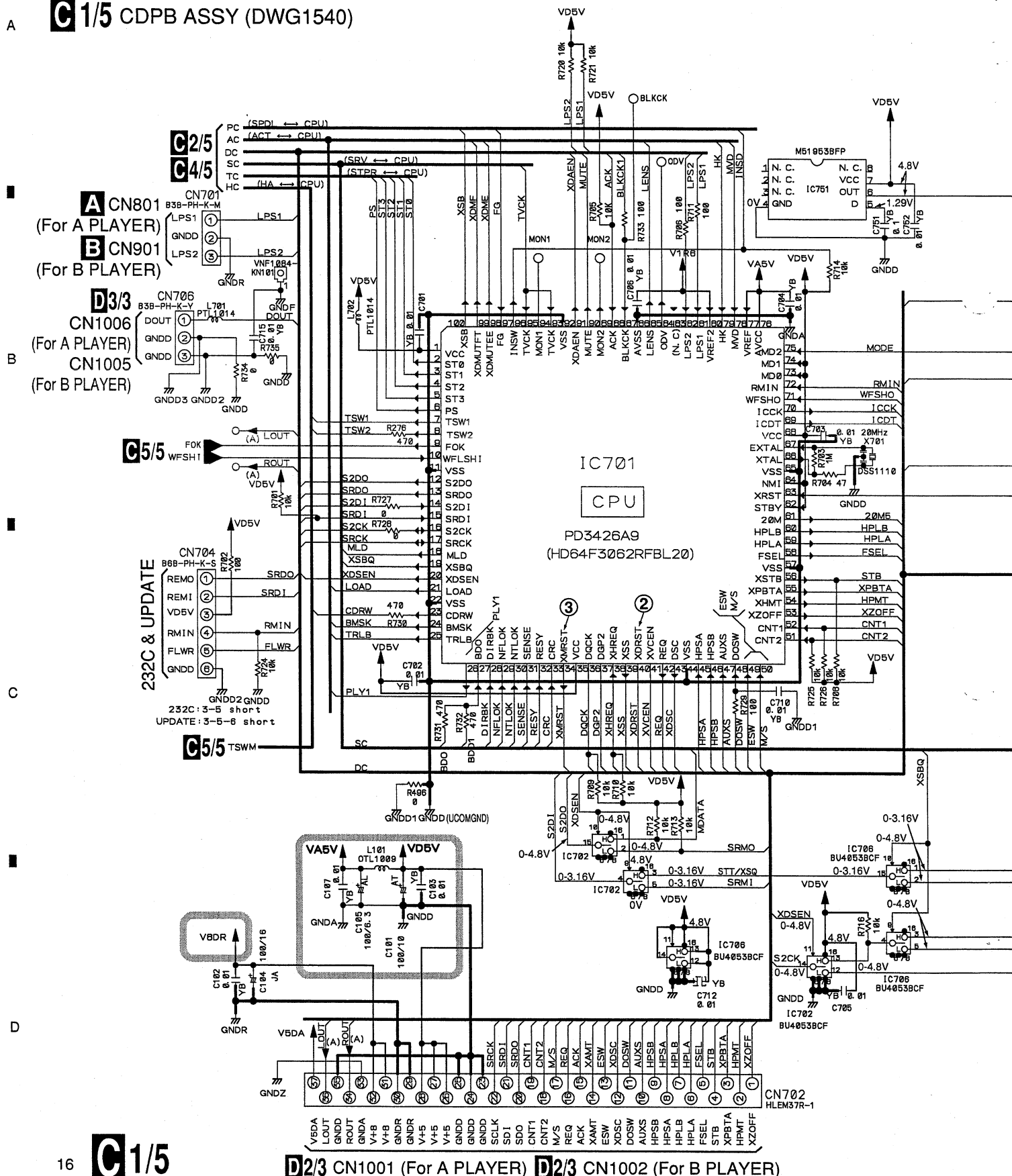
## CMX-5000, CU-V160

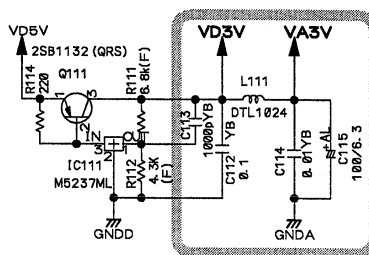
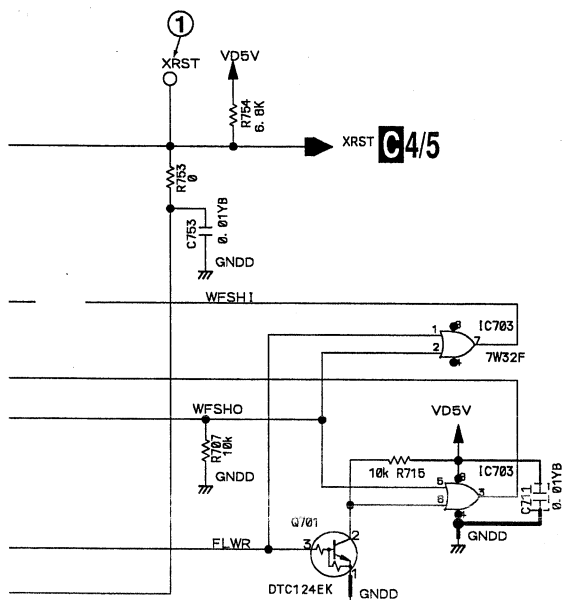
Note : When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST".



Refer to "3.13 REMOTE CONTROLLER (CU-V160) CONNECTION DIAGRAM".

**C 1/5** CDPB ASSY (DWG1540)





NOTES

RESISTORS :  $\Omega$ 

~ : RS1/10S□□□J

**CAPACITORS** :  $\mu\text{F}$

YB : CKSQYB (2125 CHIP), CKSR (1608 CHIP)

CH : CCSQCH (2125 CHIP), CCSR (1608 CHIP)

HH : 1608 SIZE CHIP

(F) Focus Servo Loop

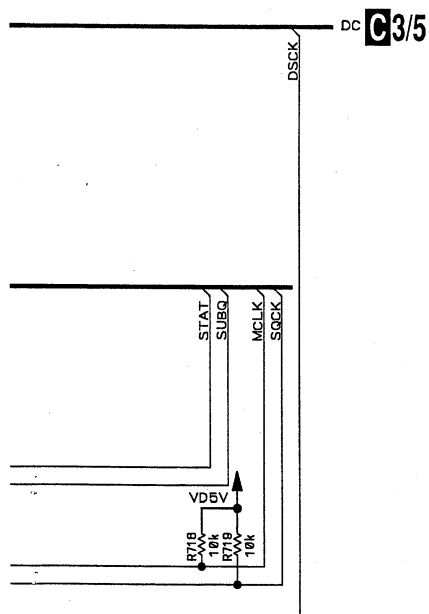
(T) Tracking Servo Loop

(L) Loading Drive

(RF) RF Singnal

(SP) Spindle Servo

(A) Audio

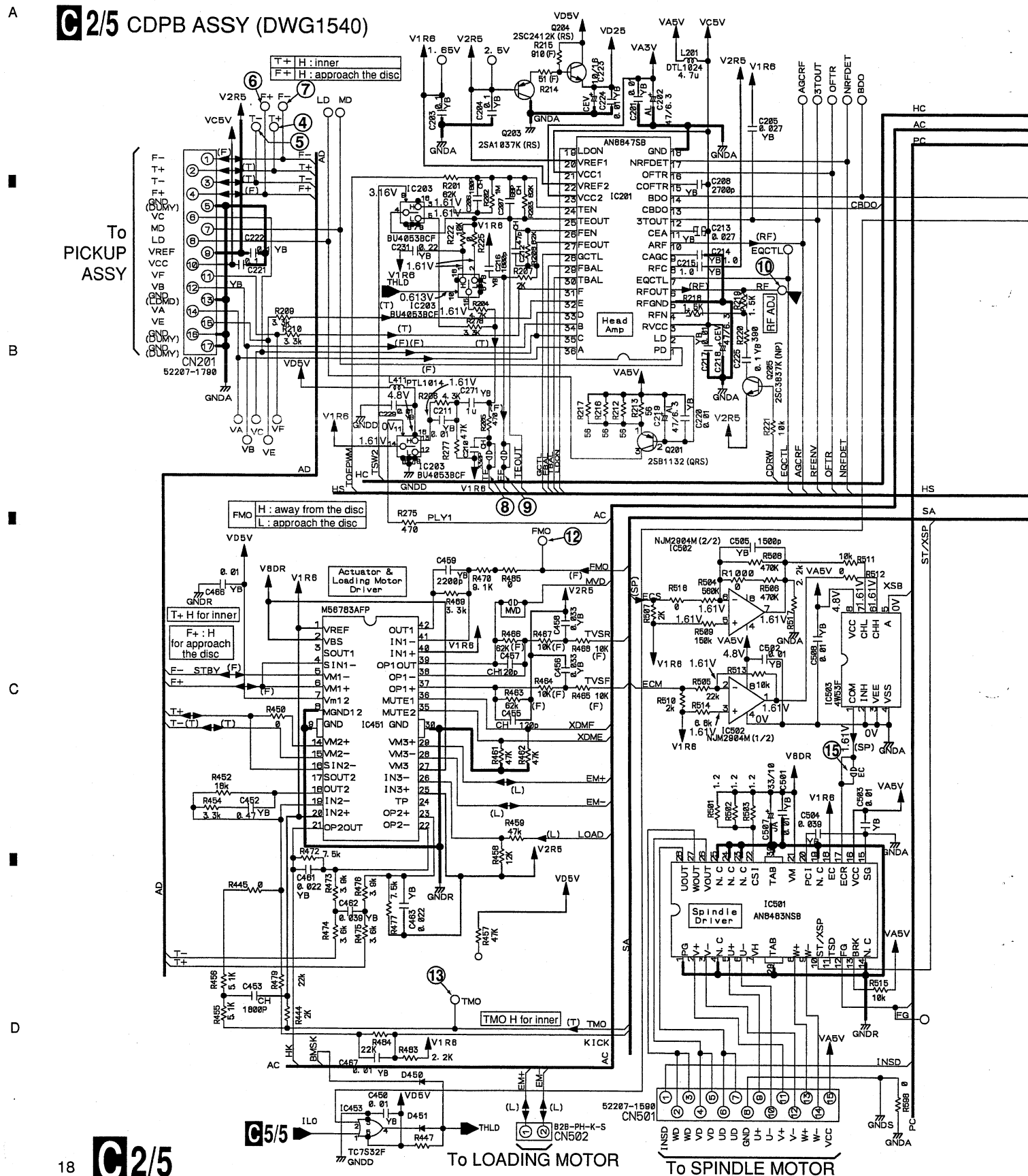
IC701

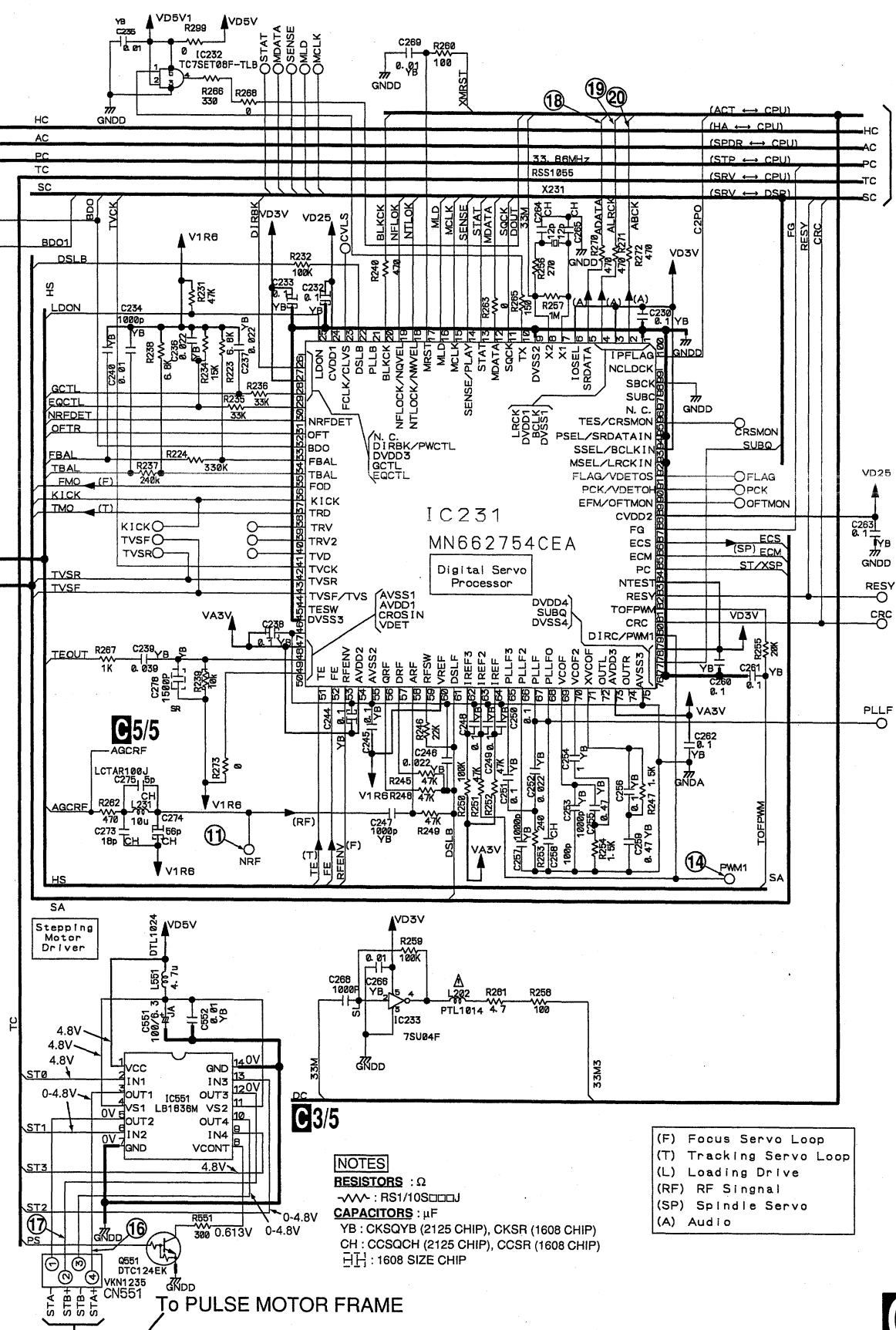
| Pin No. | Voltage (V) | Pin No. | Voltage (V) | Pin No. | Voltage (V) | Pin No. | Voltage (V) |
|---------|-------------|---------|-------------|---------|-------------|---------|-------------|
| 1       | 4.8         | 26      | 0           | 51      | 4.8         | 76      | 4.8         |
| 2       | 4.8         | 27      | 0           | 52      | 0           | 77      | 0           |
| 3       | 0 to 4.8    | 28      | 3.3         | 53      | 0           | 78      | 2.2         |
| 4       | 0 to 4.8    | 29      | 0           | 54      | 4.8         | 79      | 2.2         |
| 5       | 4.8         | 30      | 0 to 3.3    | 55      | 0 to 4.8    | 80      | 2.2         |
| 6       | 4.8         | 31      | 0 to 3.3    | 56      | 0           | 81      | 4.8         |
| 7       | 0           | 32      | 0 to 3.3    | 57      | 0           | 82      | 0 to 3.3    |
| 8       | 4.8         | 33      | 0 to 3.3    | 58      | 0           | 83      | 0           |
| 9       | 4.8         | 34      | 4.8         | 59      | 0 to 4.8    | 84      | 0           |
| 10      | 0           | 35      | 4.8         | 60      | 0           | 85      | 2.2         |
| 11      | 0           | 36      | 0           | 61      | 0 to 4.8    | 86      | 0           |
| 12      | 0 to 4.8    | 37      | 3.3         | 62      | 4.8         | 87      | 0 to 3.3    |
| 13      | 0 to 4.8    | 38      | 0           | 63      | 0           | 88      | 0 to 4.8    |
| 14      | 0 to 3.3    | 39      | 4.8         | 64      | 0           | 89      | 0           |
| 15      | 0 to 4.8    | 40      | 4.8         | 65      | 0           | 90      | 0           |
| 16      | 0 to 4.8    | 41      | 4.8         | 66      | 0           | 91      | 4.8         |
| 17      | 0 to 4.8    | 42      | 0 to 4.8    | 67      | 1.0 to 3.8  | 92      | 0           |
| 18      | 0 to 4.8    | 43      | 0           | 68      | 4.8         | 93      | 0           |
| 19      | 0 to 4.8    | 44      | 0           | 69      | 4.8         | 94      | 0           |
| 20      | 0 to 4.8    | 45      | 4.8         | 70      | 4.8         | 95      | 0           |
| 21      | 0           | 46      | 4.8         | 71      | 0           | 96      | 4.8         |
| 22      | 0           | 47      | 4.8         | 72      | 0           | 97      | 0 to 4.8    |
| 23      | 0           | 48      | 4.8         | 73      | 0           | 98      | 0           |
| 24      | 0 to 4.8    | 49      | 4.8         | 74      | 4.8         | 99      | 4.8         |
| 25      | 0           | 50      | 4.8         | 75      | 4.8         | 100     | 0           |

: The power supply is shown with the marked box.

### 3.4 CDPB ASSY (2/5)

**C 2/5** CDPB ASSY (DWG1540)

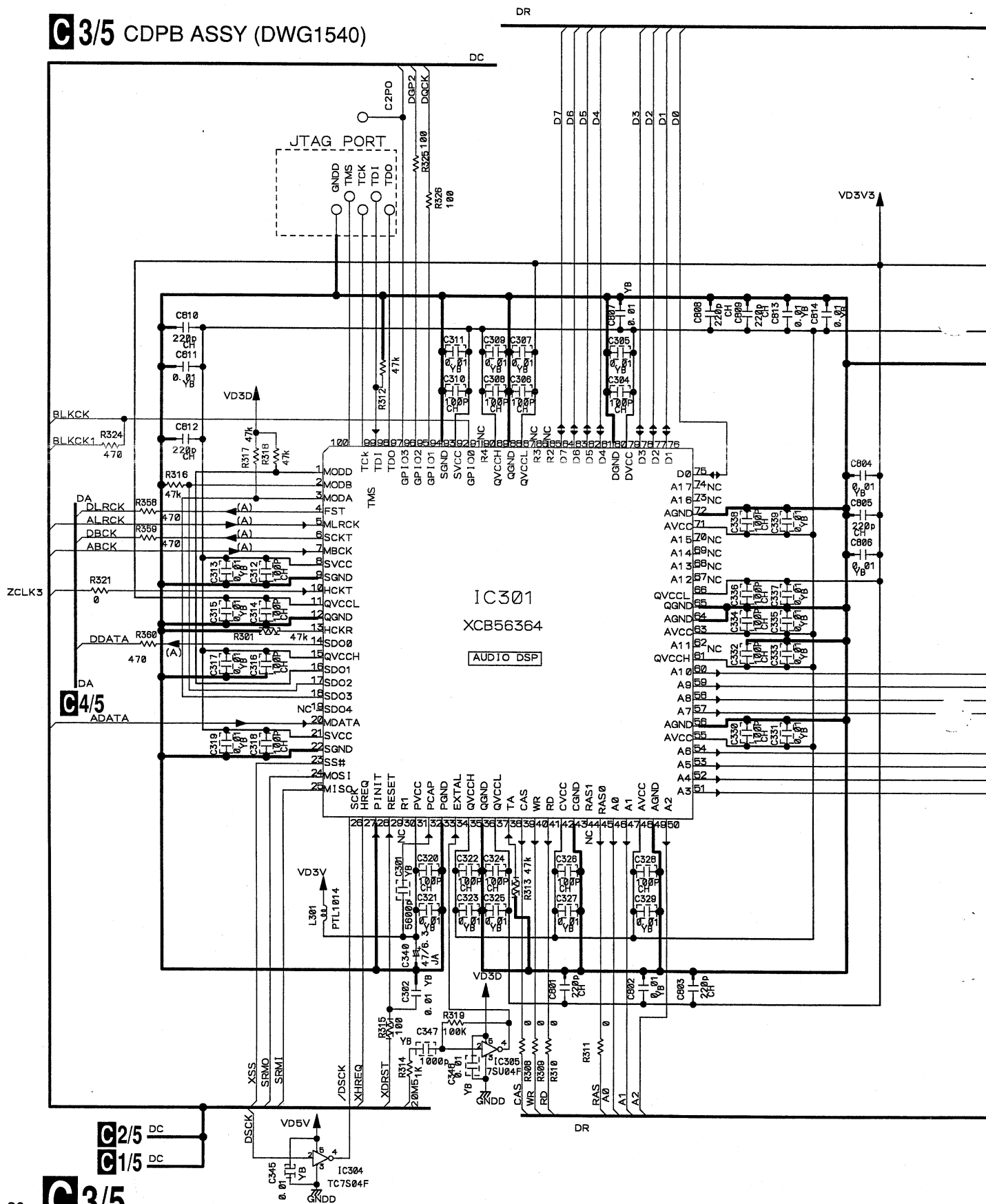


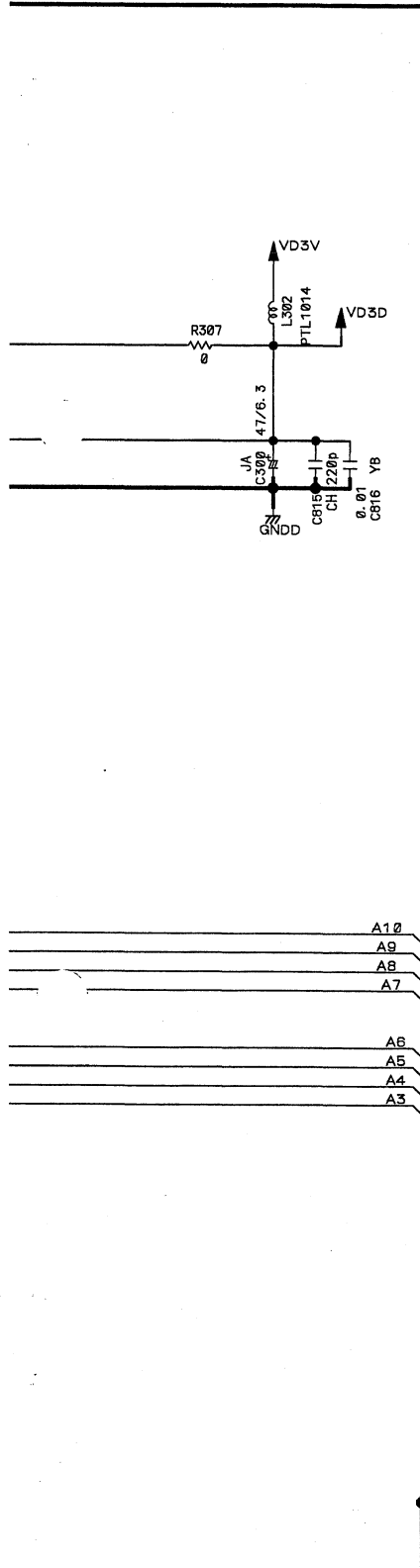


# CMX-5000, CU-V160

## 3.5 CDPB ASSY (3/5)

### C3/5 CDPB ASSY (DWG1540)



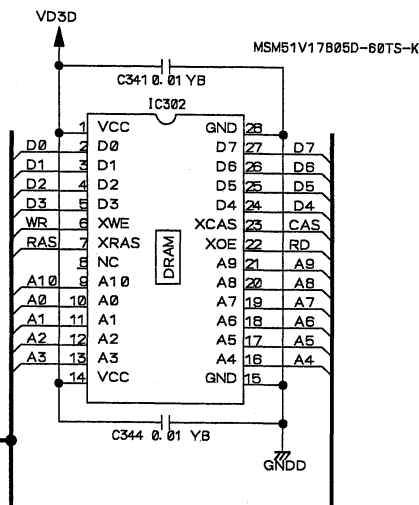


IC301

| Pin No. | Voltage (V) | Pin No. | Voltage (V) | Pin No. | Voltage (V) | Pin No. | Voltage (V) |
|---------|-------------|---------|-------------|---------|-------------|---------|-------------|
| 1       | 3.16        | 26      | 0           | 51      | 3.16        | 76      | 0           |
| 2       | 3.16        | 27      | 0           | 52      | 3.16        | 77      | 0           |
| 3       | 3.16        | 28      | 0           | 53      | 3.16        | 78      | 0           |
| 4       | 0 to 3.16   | 29      | 4.8         | 54      | 0           | 79      | 3.16        |
| 5       | 0 to 3.16   | 30      | 0           | 55      | 3.16        | 80      | 0           |
| 6       | 0 to 3.16   | 31      | 3.16        | 56      | 0           | 81      | 0           |
| 7       | 0 to 3.16   | 32      | 1.2         | 57      | 0           | 82      | 0           |
| 8       | 3.16        | 33      | 0           | 58      | 0           | 83      | 0           |
| 9       | 0           | 34      | 0.8 to 2.0  | 59      | 3.16        | 84      | 0           |
| 10      | 1.0 to 2.5  | 35      | 3.16        | 60      | 0           | 85      | 0           |
| 11      | 0           | 36      | 0           | 61      | 3.16        | 86      | 0           |
| 12      | 0           | 37      | 3.16        | 62      | 3.16        | 87      | 3.16        |
| 13      | 0           | 38      | 0           | 63      | 3.16        | 88      | 0           |
| 14      | 0           | 39      | 0 to 3.16   | 64      | 0           | 89      | 3.16        |
| 15      | 3.16        | 40      | 3.16        | 65      | 0           | 90      | 0           |
| 16      | 3.16        | 41      | 3.16        | 66      | 3.16        | 91      | 0 to 3.16   |
| 17      | 3.16        | 42      | 3.16        | 67      | 0           | 92      | 3.16        |
| 18      | 3.16        | 43      | 0           | 68      | 3.16        | 93      | 0           |
| 19      | 0 to 3.16   | 44      | 3.16        | 69      | 3.16        | 94      | 0           |
| 20      | 0 to 3.16   | 45      | 0 to 3.16   | 70      | 3.16        | 95      | 3.16        |
| 21      | 3.16        | 46      | 3.16        | 71      | 3.16        | 96      | 0           |
| 22      | 0           | 47      | 3.16        | 72      | 0           | 97      | 0           |
| 23      | 4.8         | 48      | 3.16        | 73      | 3.16        | 98      | 1.5         |
| 24      | 4.8         | 49      | 0           | 74      | 3.16        | 99      | 3.16        |
| 25      | 0           | 50      | 3.16        | 75      | 0           | 100     | 3.16        |

IC302

| Pin No. | Voltage (V) |
|---------|-------------|
| 1       | 3.16        |
| 2       | 0           |
| 3       | 3.16        |
| 4       | 3.16        |
| 5       | 3.16        |
| 6       | 3.16        |
| 7       | 3.16        |
| 8       | 0           |
| 9       | 0 to 3.16   |
| 10      | 0 to 3.16   |
| 11      | 0 to 3.16   |
| 12      | 0 to 3.16   |
| 13      | 0 to 3.16   |
| 14      | 3.16        |
| 15      | 0           |
| 16      | 0 to 3.16   |
| 17      | 0 to 3.16   |
| 18      | 0 to 3.16   |
| 19      | 0 to 3.16   |
| 20      | 0 to 3.16   |
| 21      | 0 to 3.16   |
| 22      | 0 to 3.16   |
| 23      | 0 to 3.16   |
| 24      | 0 to 3.16   |
| 25      | 0 to 3.16   |
| 26      | 0 to 3.16   |
| 27      | 0 to 3.16   |
| 28      | 0           |



## NOTES

RESISTORS :  $\Omega$ 

~W~ : RS1/10S

CAPACITORS :  $\mu F$ 

YB : CKSQYB (2125 CHIP), CKSR (1608 CHIP)

CH : CCSQCH (2125 CHIP), CCSR (1608 CHIP)

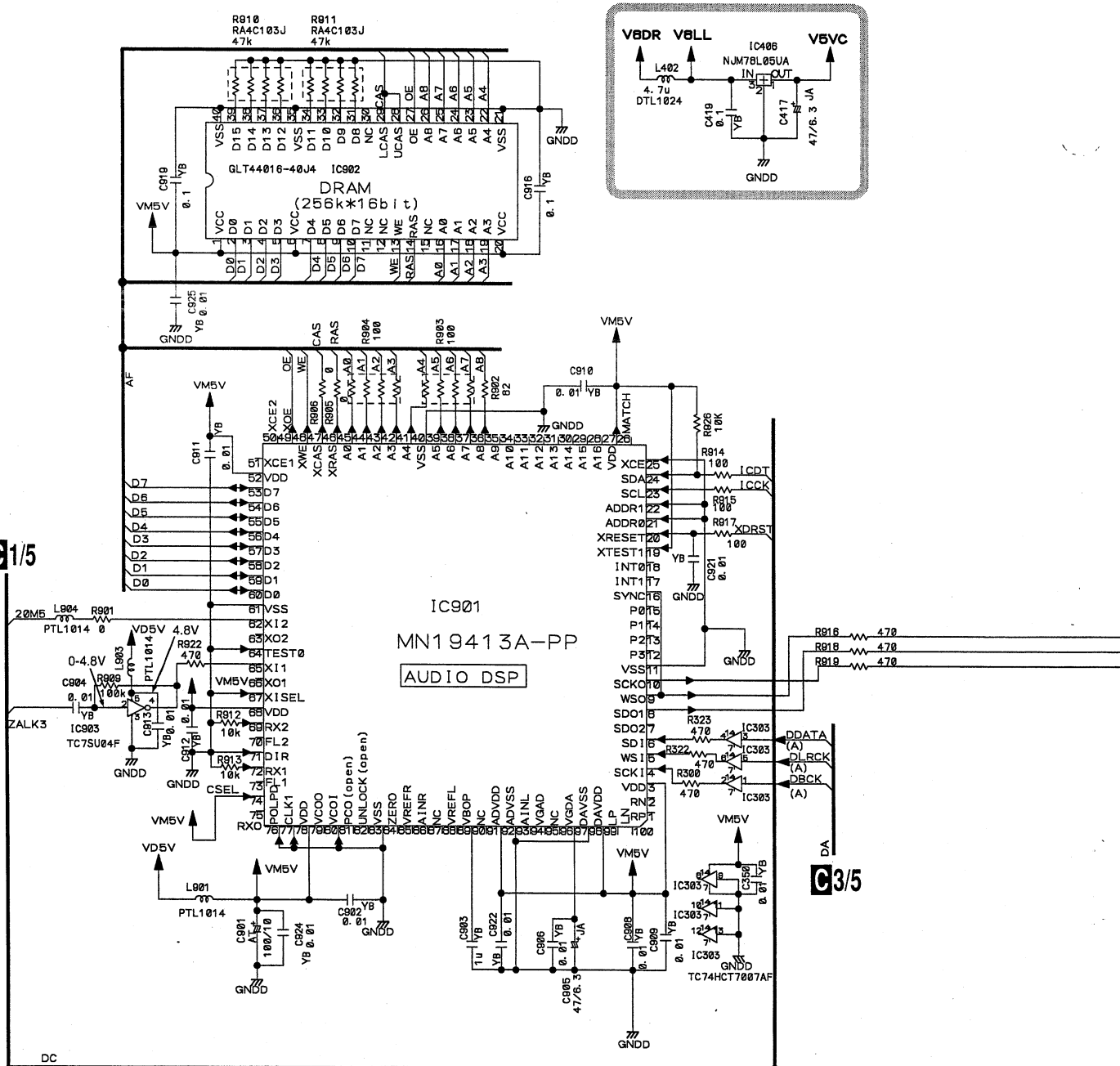
H : 1608 SIZE CHIP

(F) Focus Servo Loop  
 (T) Tracking Servo Loop  
 (L) Loading Drive  
 (RF) RF Signal  
 (SP) Spindle Servo  
 (A) Audio

# CMX-5000, CU-V160

## 3.6 CDPB ASSY (4/5)

### C 4/5 CDPB ASSY (DWG1540)



(F) Focus Servo Loop  
(T) Tracking Servo Loop  
(L) Loading Drive  
(RF) RF Singnal  
(SP) Spindle Servo  
(A) Audio

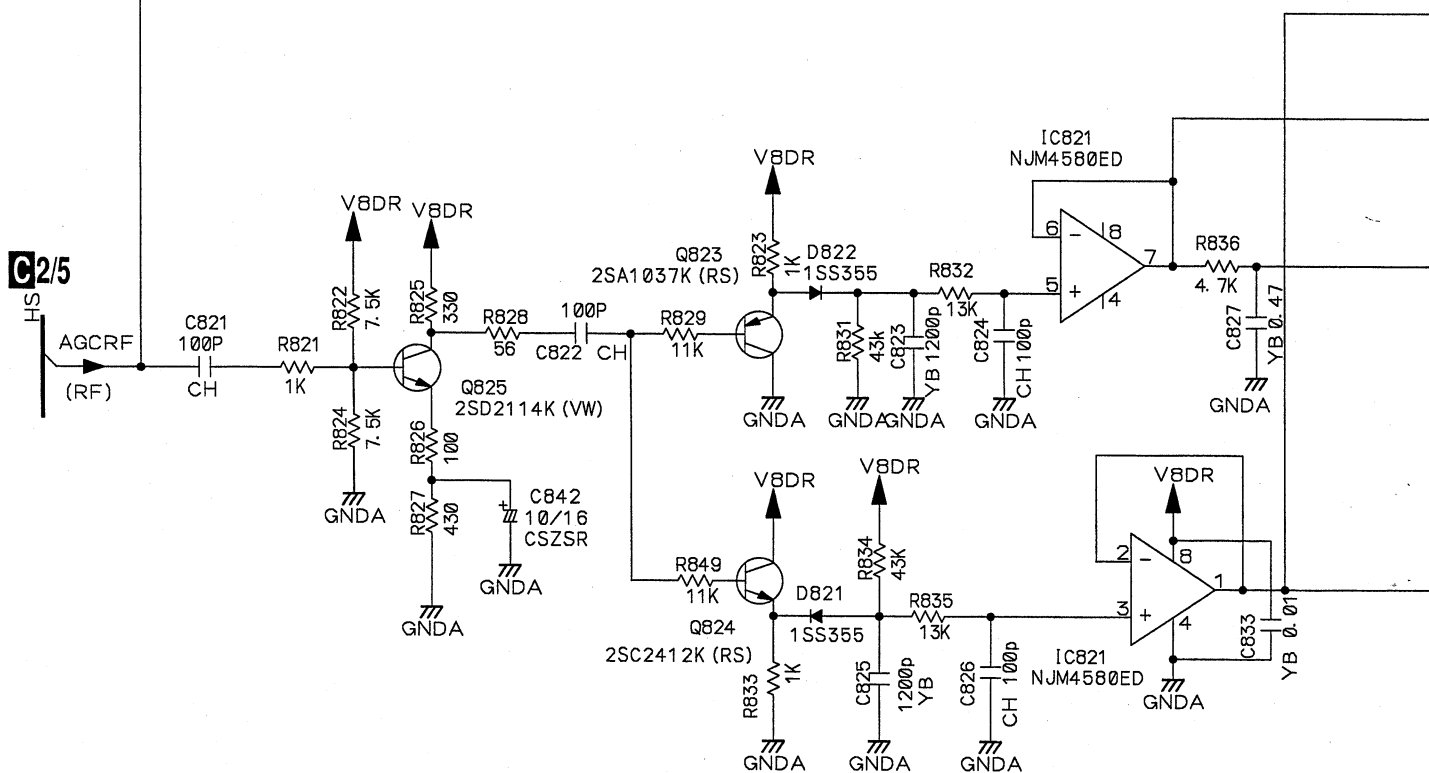
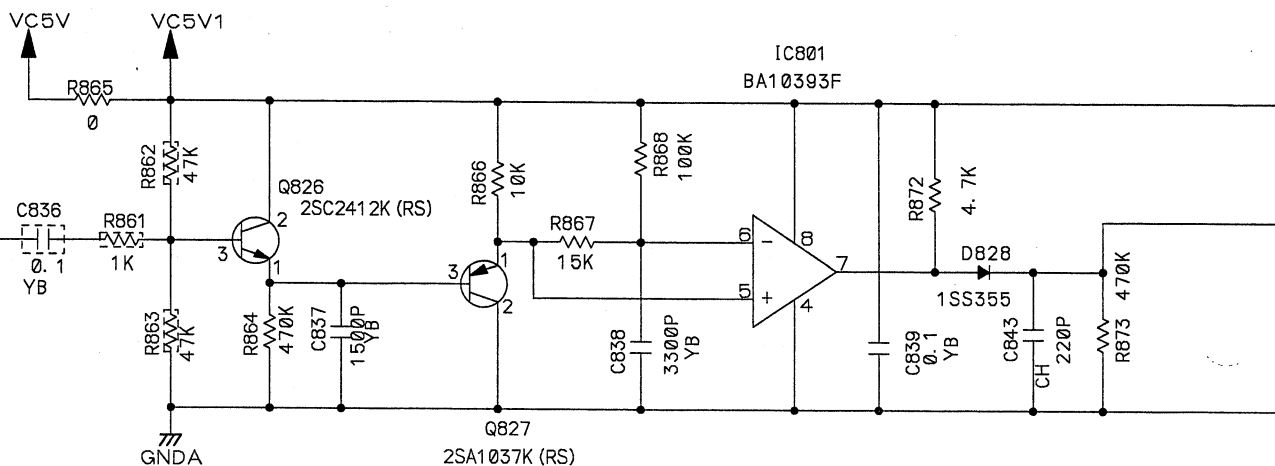
YB : CKSQYB (2125 CHIP), CKSR (1608 CHIP)  
CH : CCSQCH (2125 CHIP), CCSR (1608 CHIP)  
HT : 1608 SIZE CHIP



# CMX-5000, CU-V160

## 3.7 CDPB ASSY (5/5)

### C5/5 CDPB ASSY (DWG1540)



## CMX-5000, CU-V160

## NOTES

RESISTORS :  $\Omega$ 

~: RS1/10S□□□

CAPACITORS :  $\mu$ F

YB : CKSQYB (2125 CHIP), CKSR (1608 CHIP)

CH : CCSQCH (2125 CHIP), CCSR (1608 CHIP)

□: 1608 SIZE CHIP

(F) Focus Servo Loop

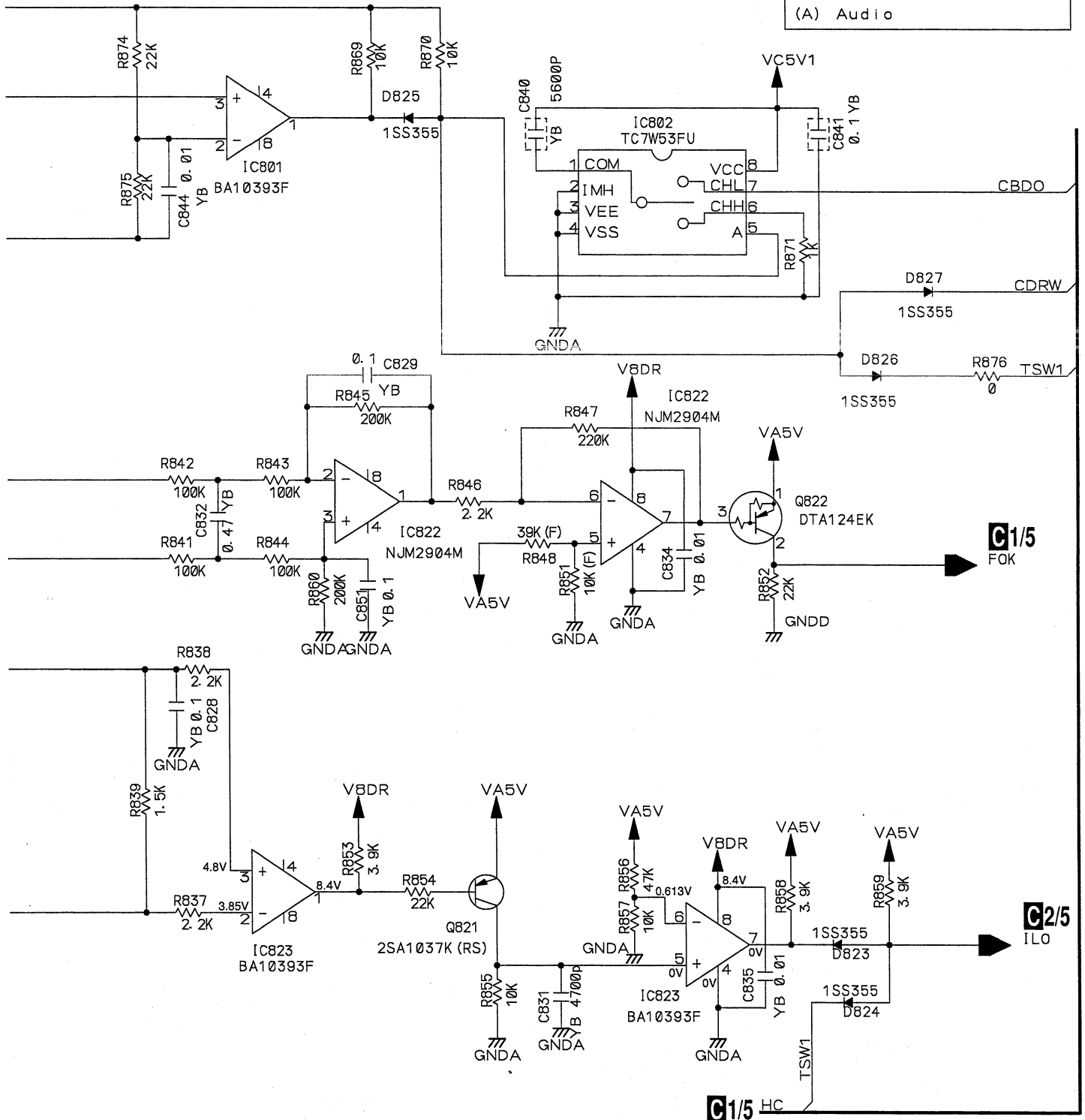
(T) Tracking Servo Loop

(L) Loading Drive

(RF) RF Signal

(SP) Spindle Servo

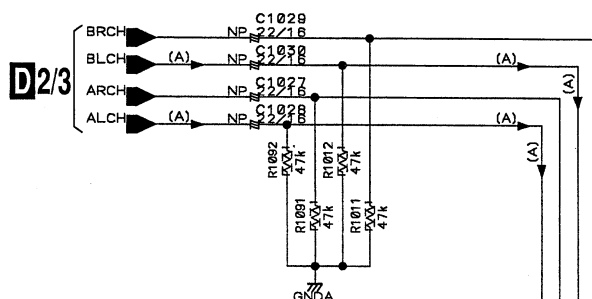
(A) Audio



# CMX-5000, CU-V160

## 3.8 TRMB ASSY (1/3)

A

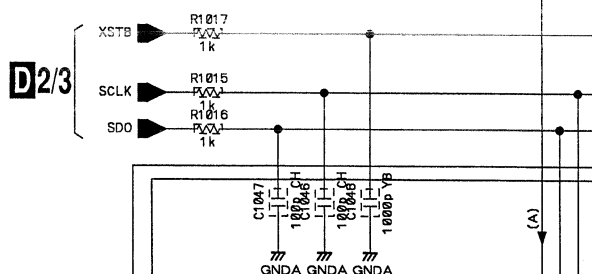


### D1/3 TRMB ASSY (DWX2066)

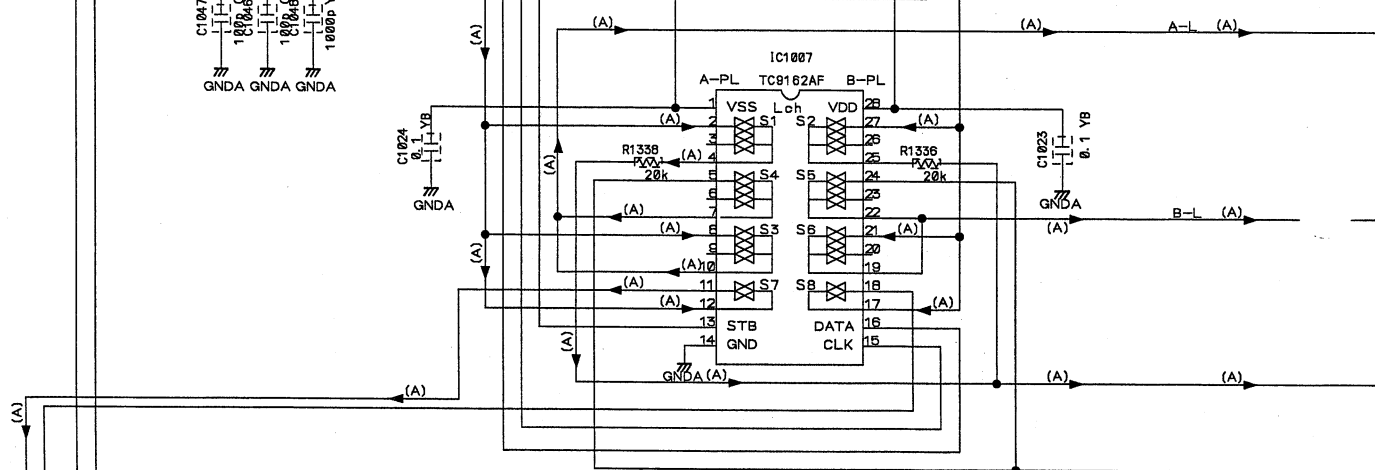
| MIX SW ASSIGN | S1  | S2  | S3  | S4  | S5  | S6  |
|---------------|-----|-----|-----|-----|-----|-----|
| NORMAL        | A/B | ON  | ON  | ON  | OFF | OFF |
| MIX           | ON  | ON  | ON  | OFF | OFF | ON  |
| AUTO          | A/B | ON  | OFF | ON  | OFF | OFF |
|               | ON  | ON  | ON  | OFF | ON  | ON  |
|               | ON  | OFF | ON  | ON  | ON  | OFF |

| HP SW ASSIGN | S7  | S8  |
|--------------|-----|-----|
| A            | ON  | OFF |
| B            | OFF | ON  |
| A&B          | ON  | ON  |

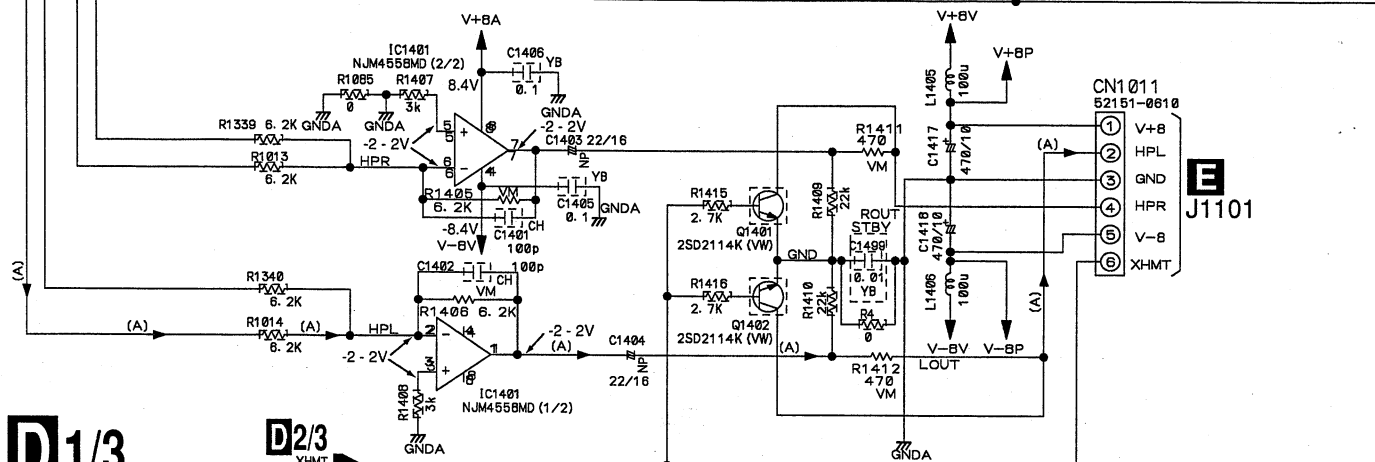
B



C

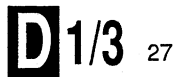


D



M : CQMA

**A**  
AUDIO OUT

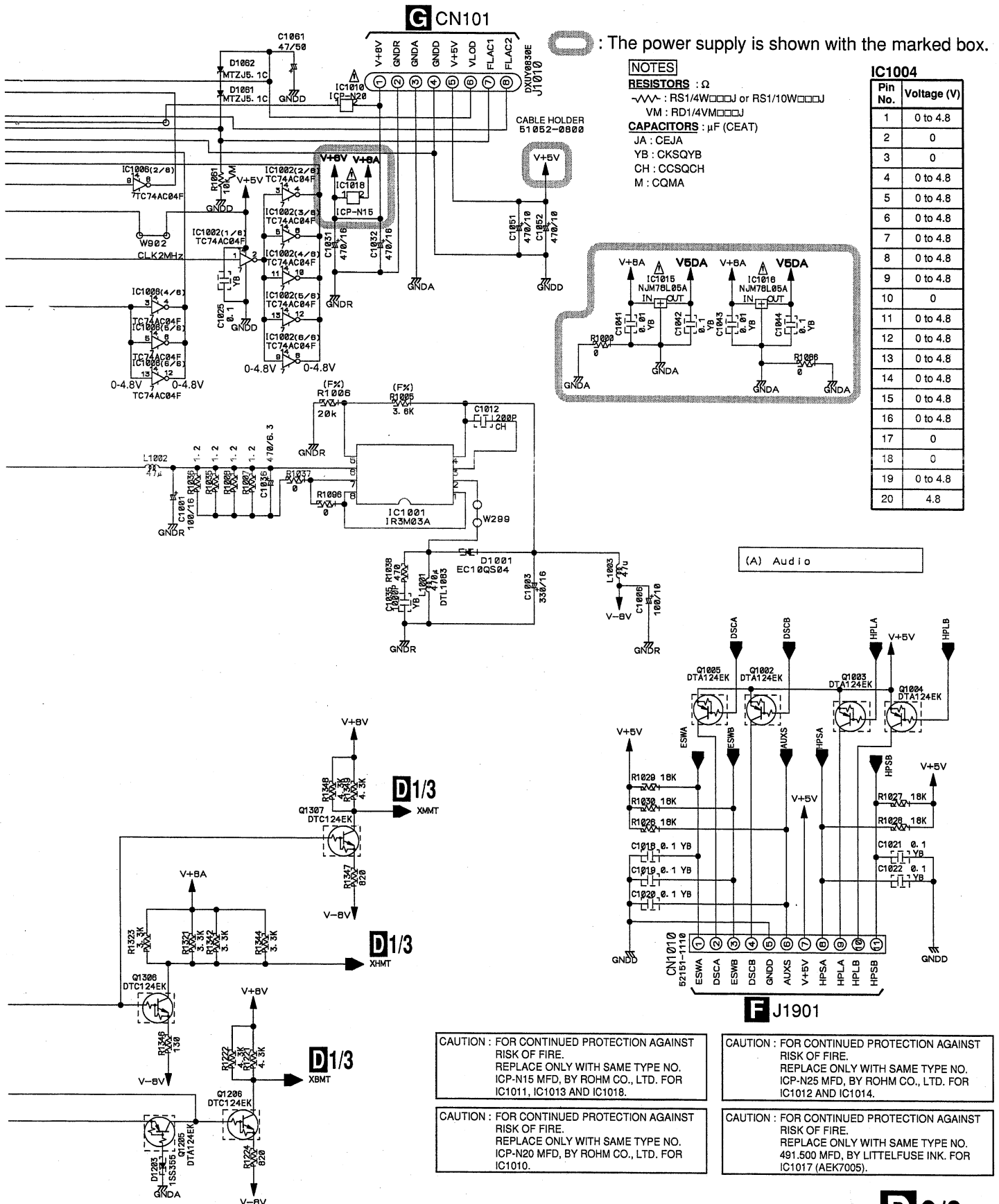


### 3.9 TRMB ASSY (2/3)

**D 2/3** TRMB ASSY (DWX2066)

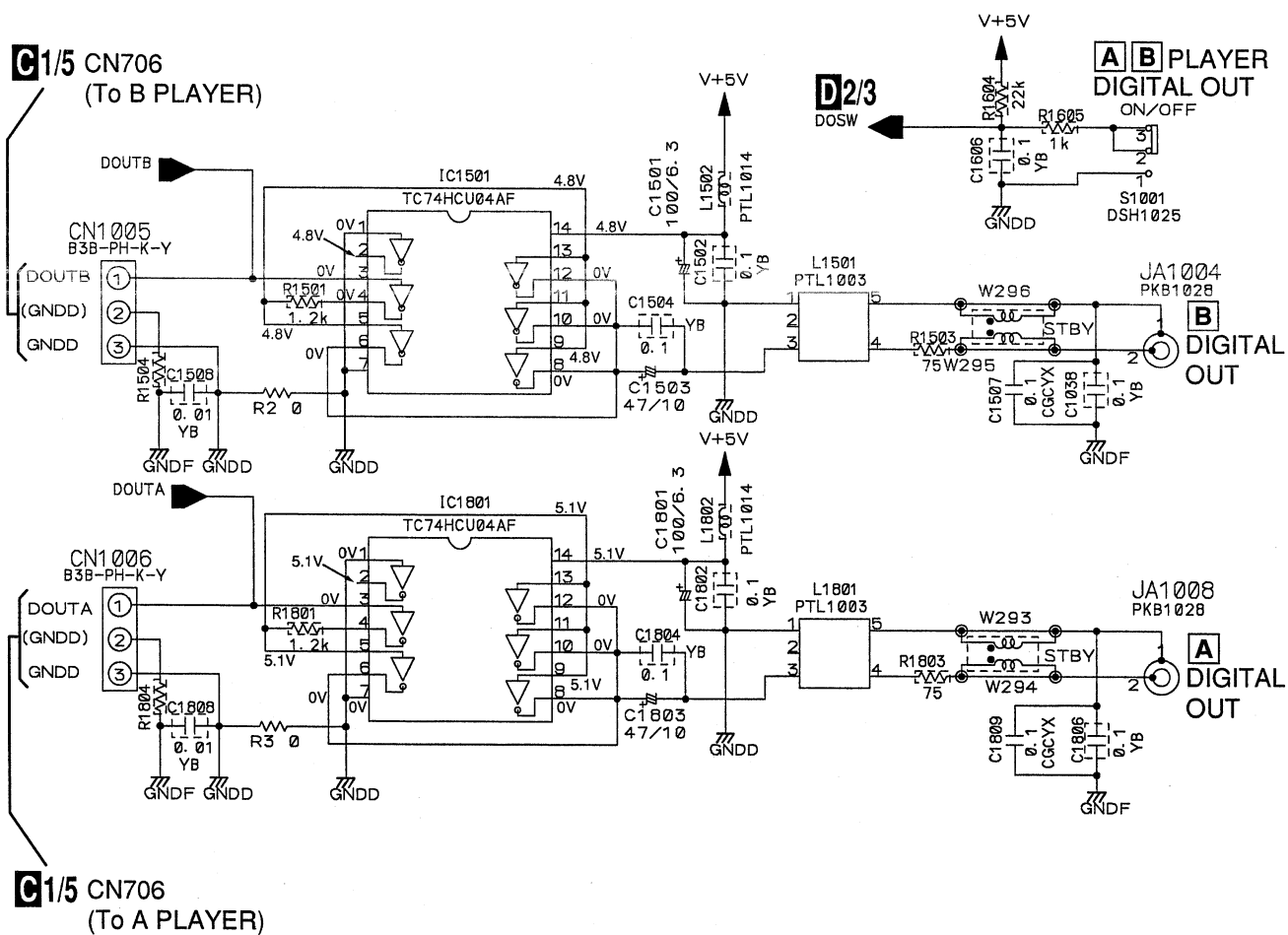


## CMX-5000, CU-V160



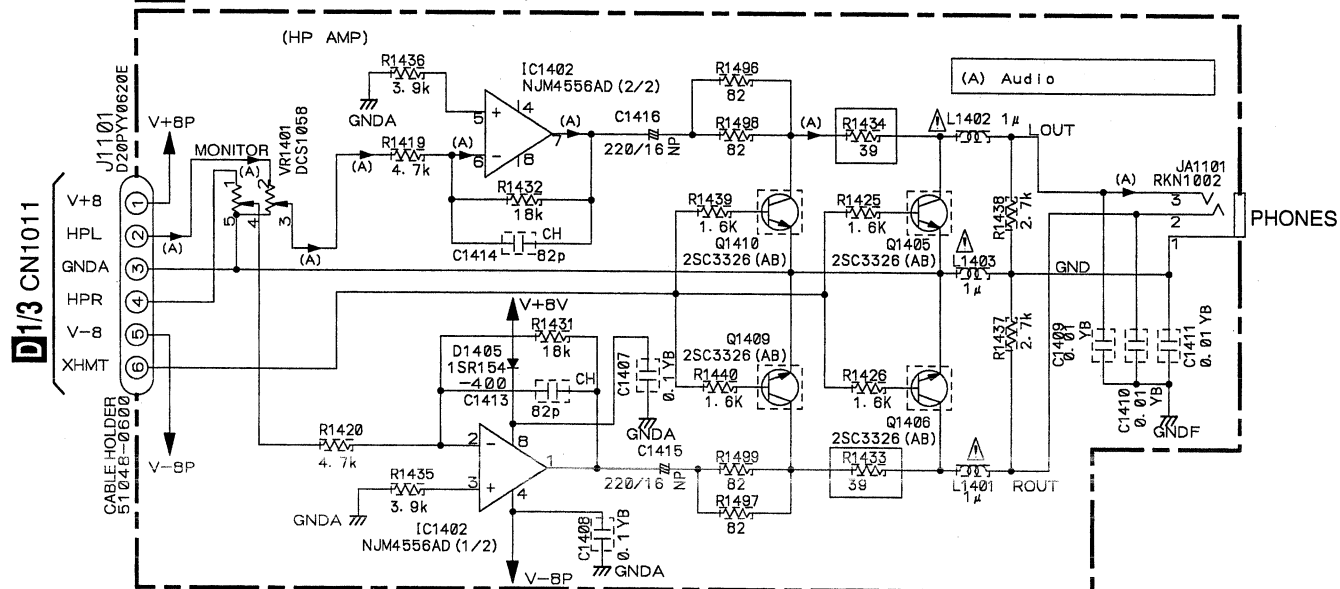
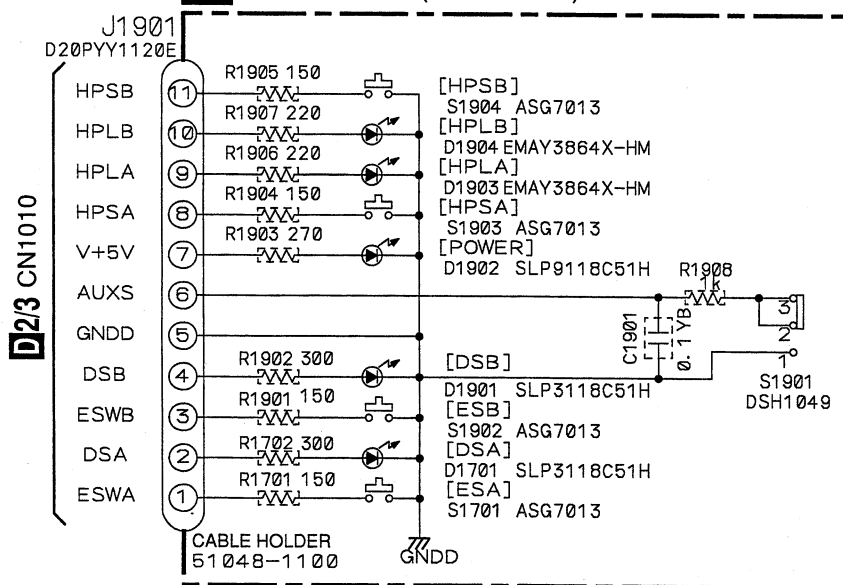
### 3.10 TRMB ASSY (3/3)

#### D3/3 TRMB ASSY (DWX2066)



### 3.11 HPJB and SELB ASSYS

## E HPJB ASSY (DWX2067)

**F** SELB ASSY (DWS1302)

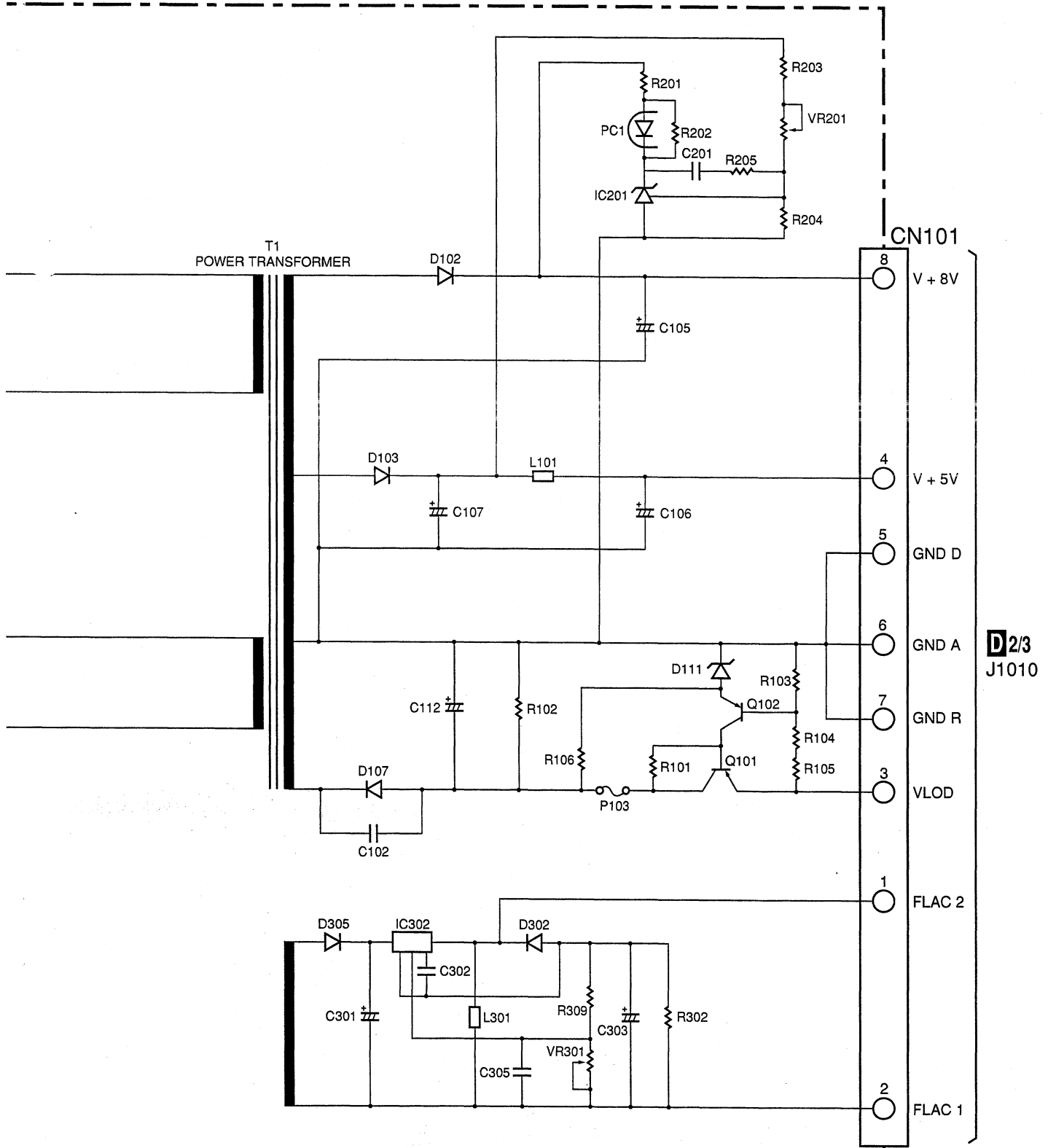
## SELB ASSY

S1701 : A PLAYER EJECT (△)  
S1901 : A • B AUDIO OUT SELECT  
          A • B \_ A • B/AUTO MIX  
S1902 : B PLAYER EJECT (△)  
S1903 : PLAYER SELECT A  
S1904 : PLAYER SELECT B

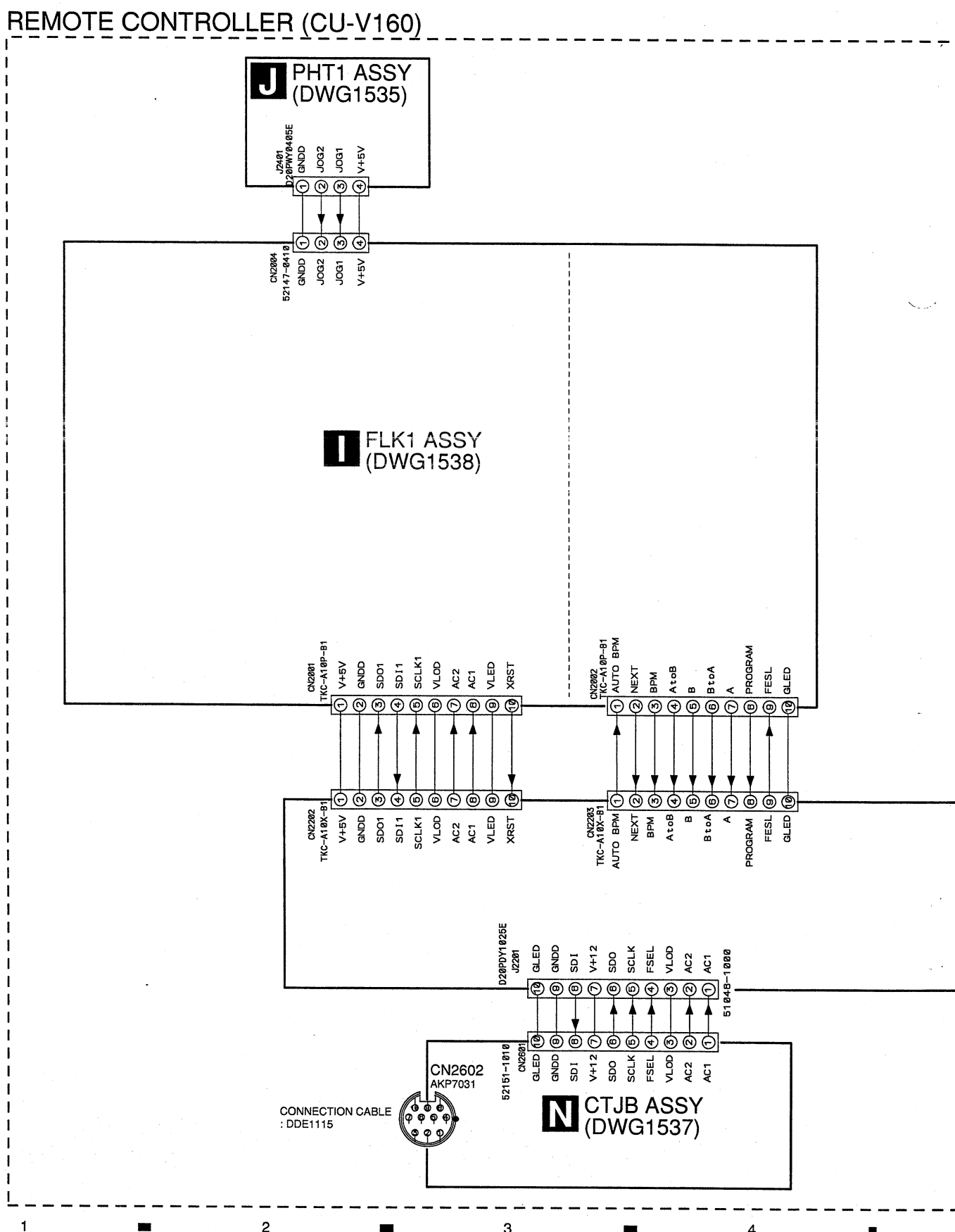


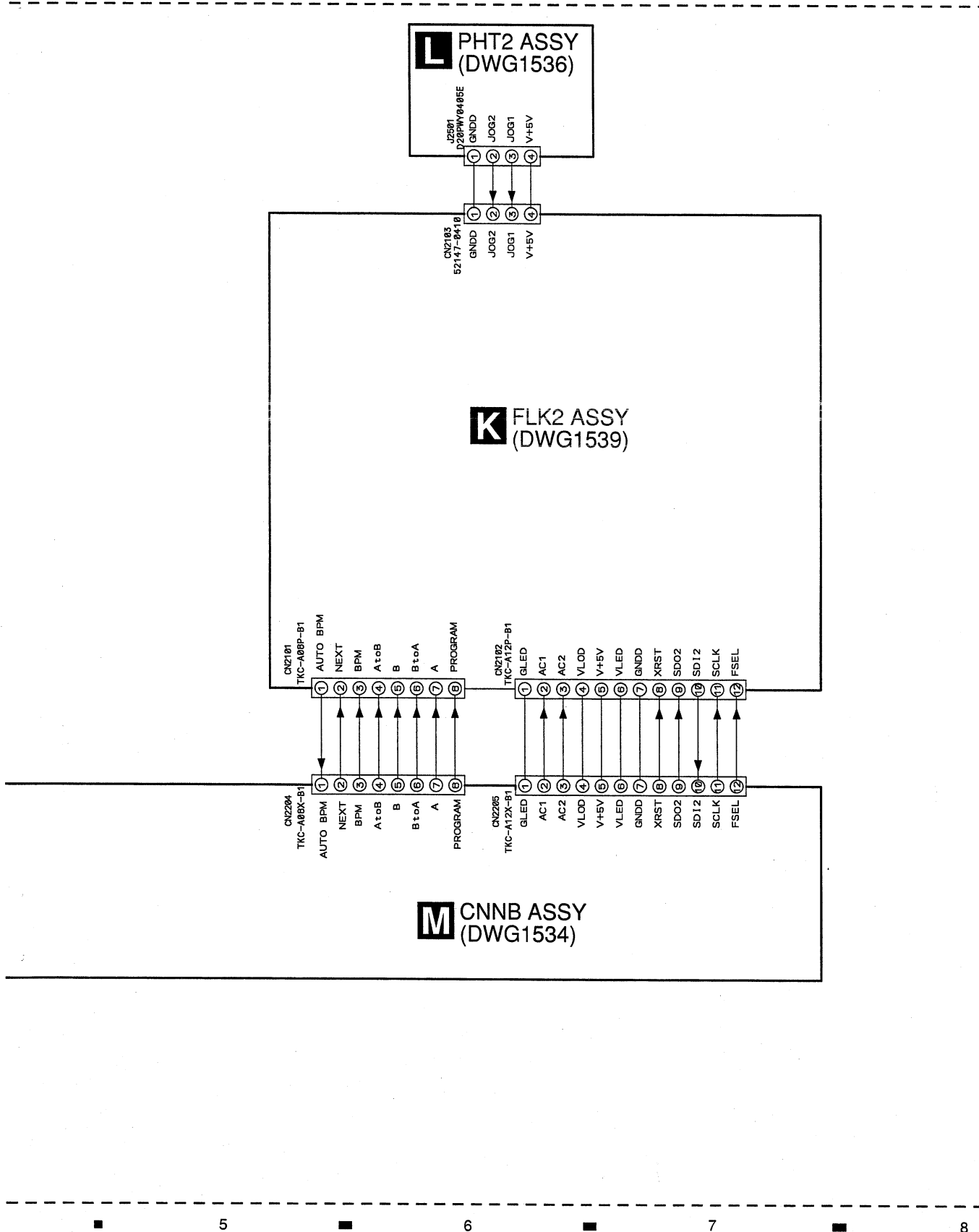


## SW POWER SUPPLY ASSY (DWR1330)

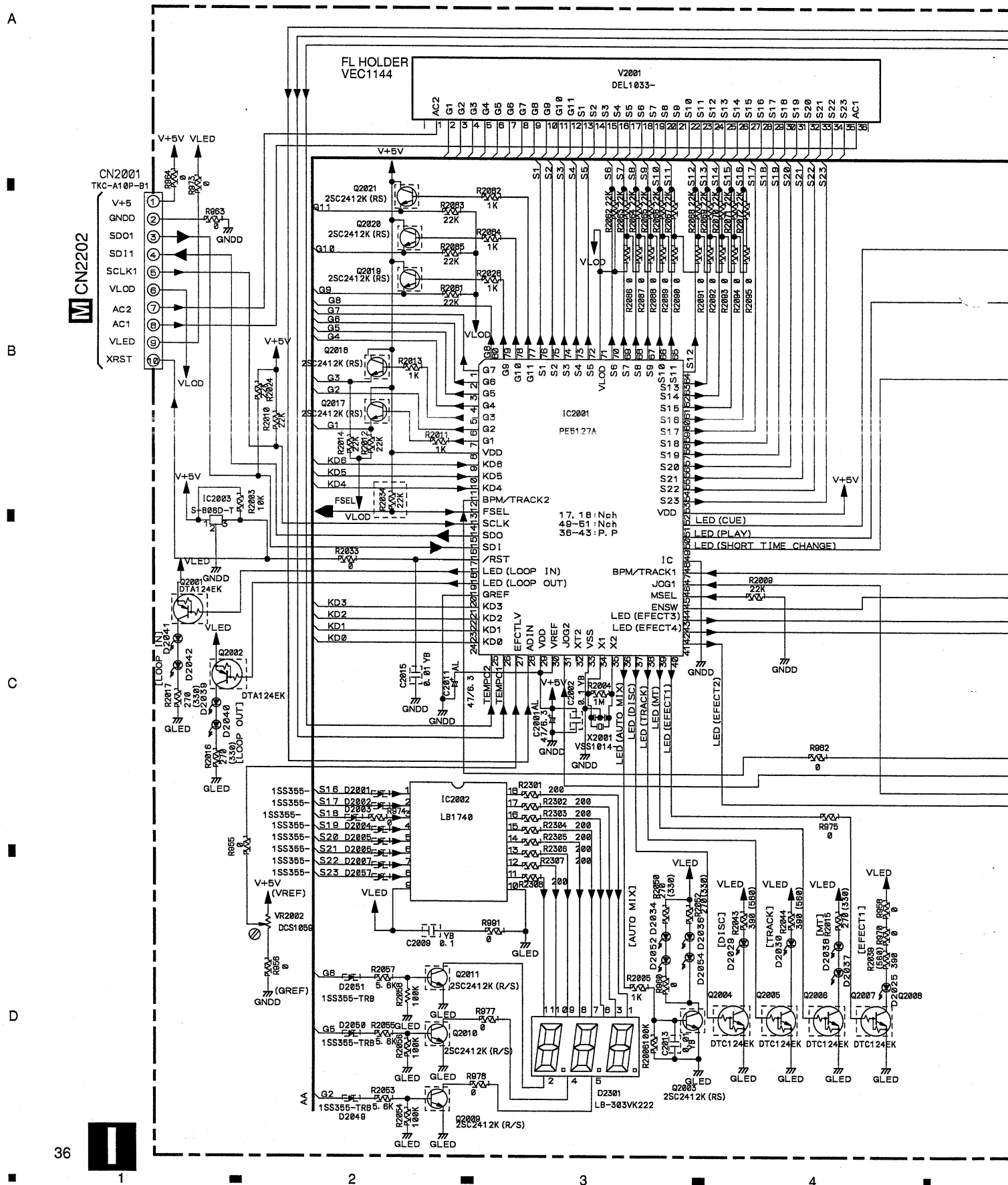


### 3.13 OVERALL WIRING DIAGRAM FOR REMOTE CONTROLLER (CU-V160)

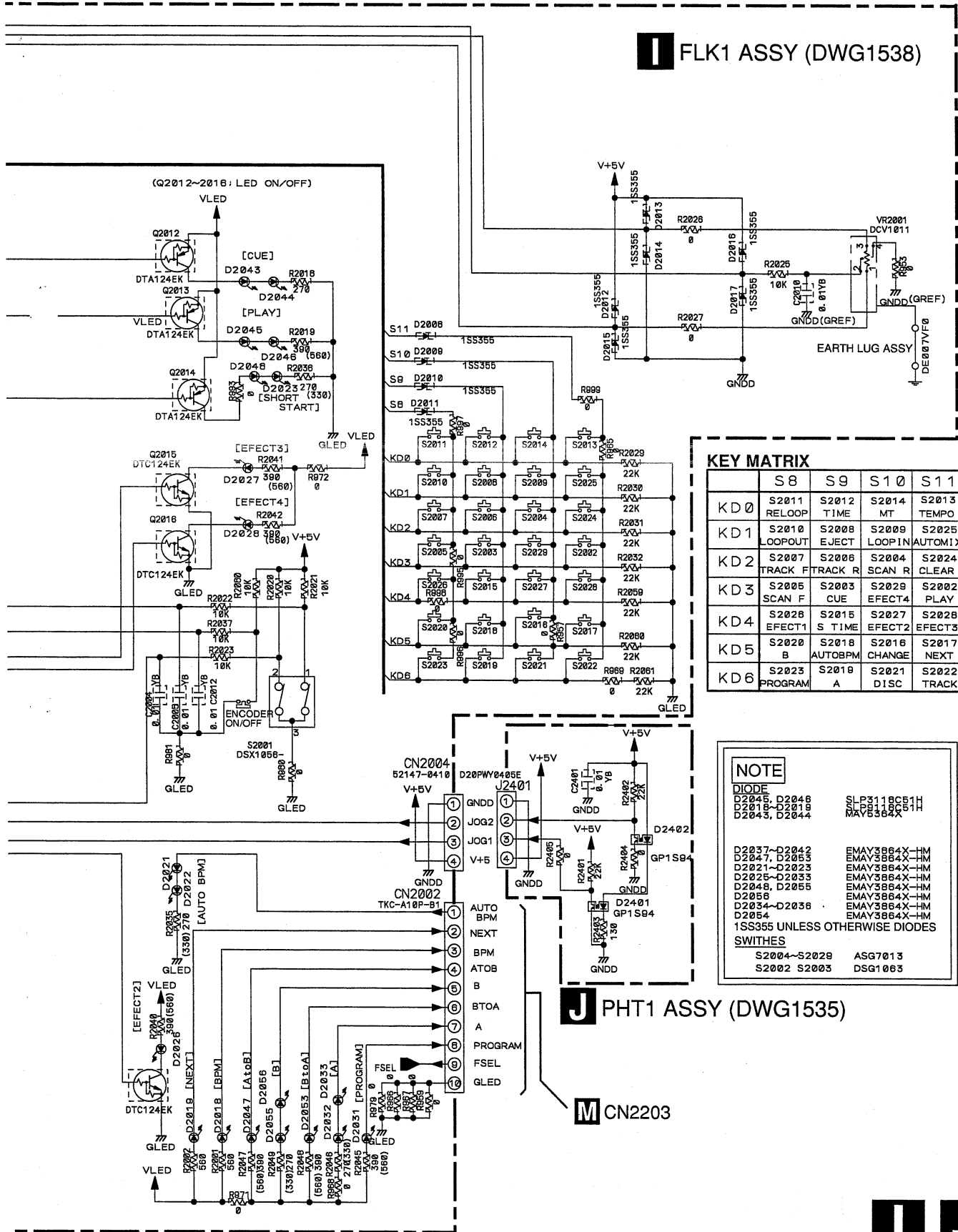




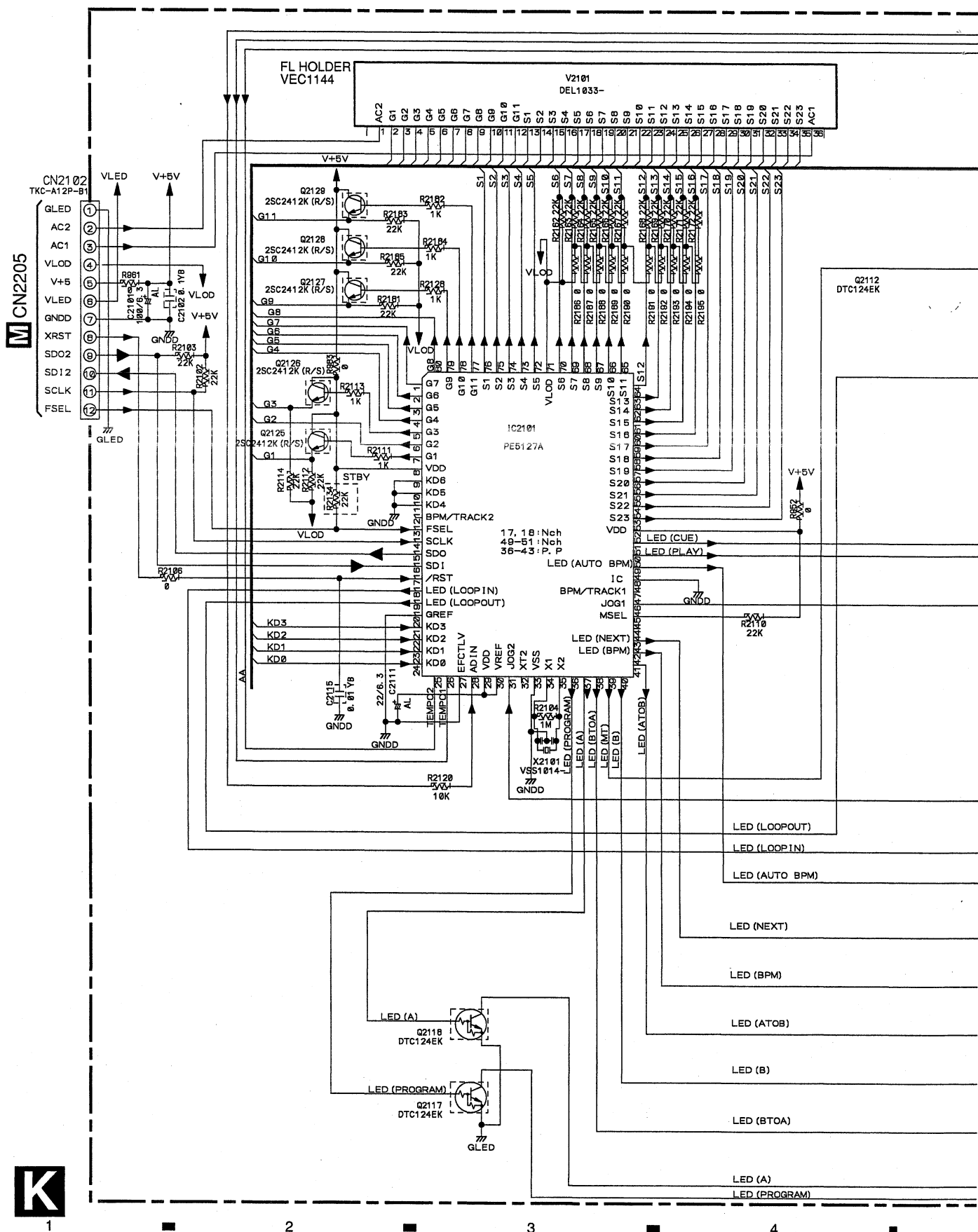
### 3.14 FLK1 and PHT1 ASSYS



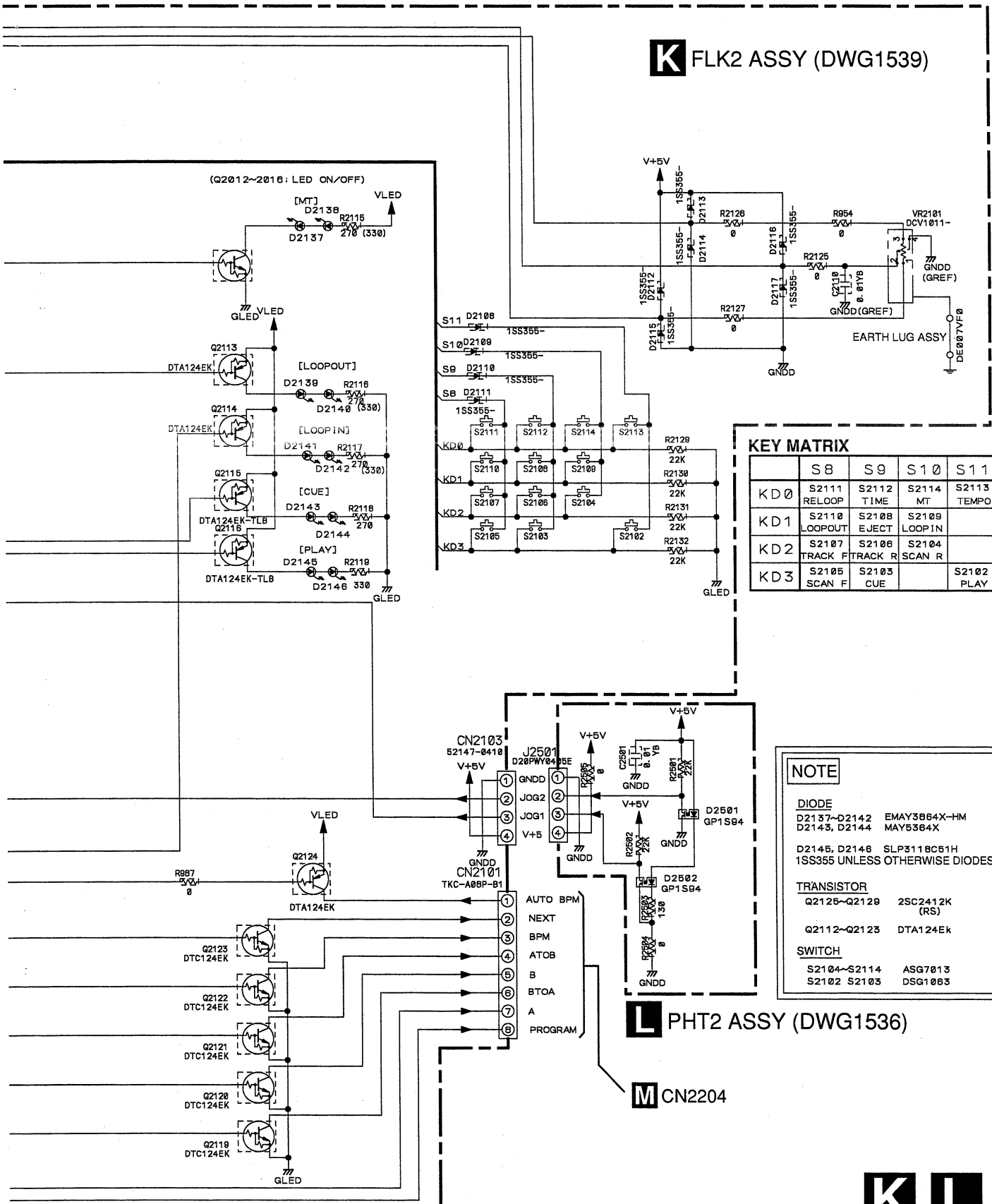
## I FLK1 ASSY (DWG1538)



### 3.15 FLK2 and PHT2 ASSYS



# **K** FLK2 ASSY (DWG1539)

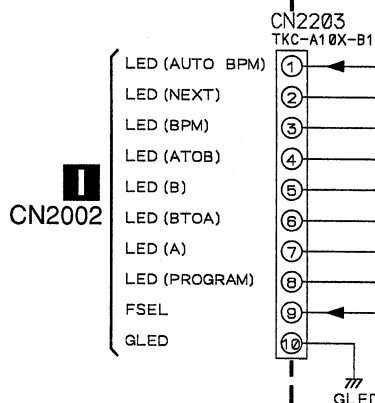


## **L** PHT2 ASSY (DWG1536)

**M** CN2204

### 3.16 CNNB and CTJB ASSYS

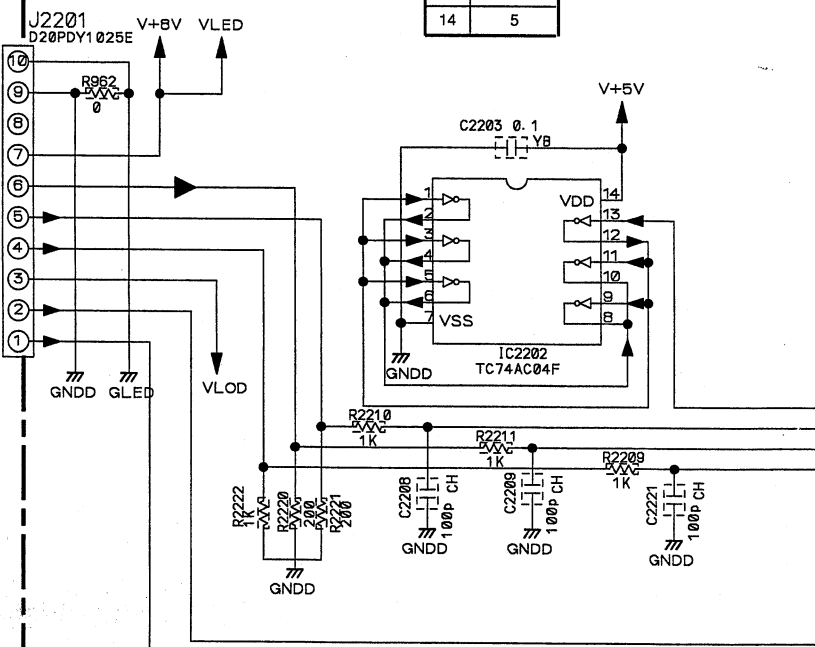
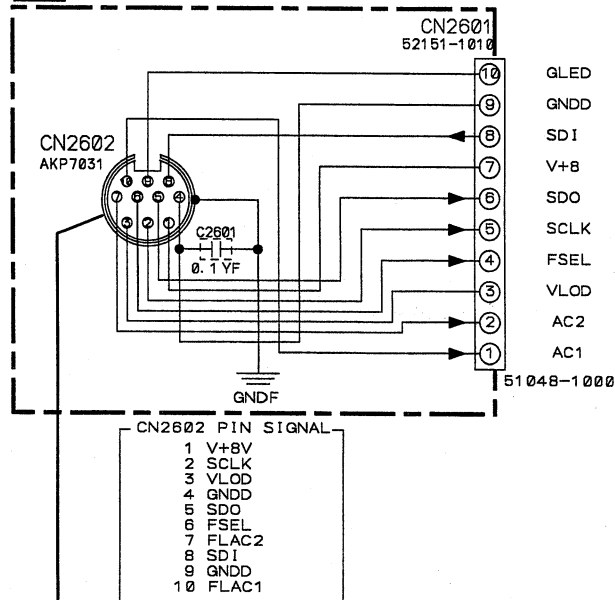
#### M CNNB ASSY (DWG1534)



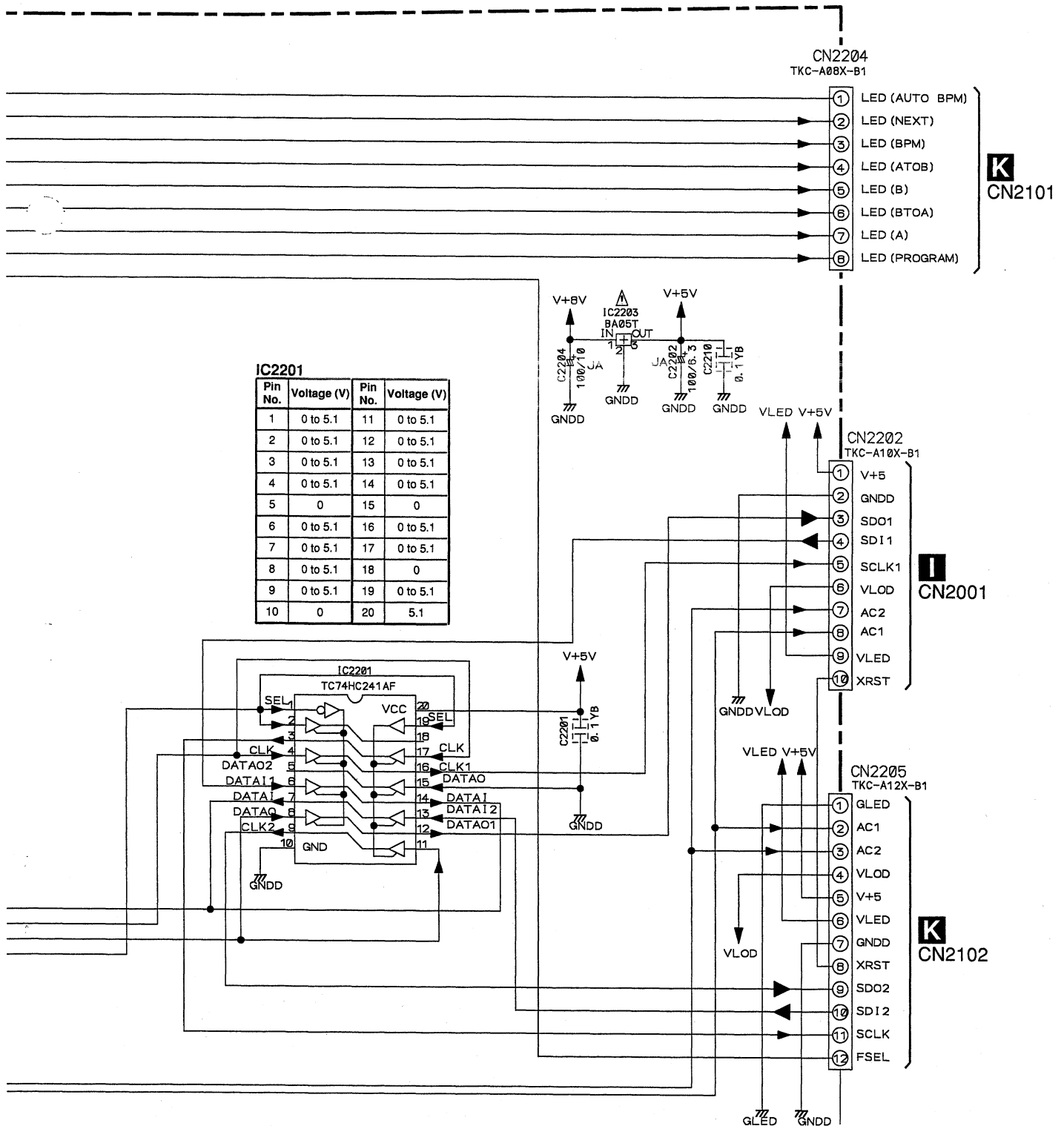
#### IC2202

| Pin No. | Voltage (V) |
|---------|-------------|
| 1       | 0 to 5.0    |
| 2       | 0 to 5.0    |
| 3       | 0 to 5.0    |
| 4       | 0 to 5.0    |
| 5       | 0 to 5.0    |
| 6       | 0 to 5.0    |
| 7       | 0           |
| 8       | 0 to 5.0    |
| 9       | 0 to 5.0    |
| 10      | 0 to 5.0    |
| 11      | 0 to 5.0    |
| 12      | 0 to 5.0    |
| 13      | 0 to 5.0    |
| 14      | 5           |

#### N CTJB ASSY (DWG1537)



To PLAYER  
D2/3 CN1007



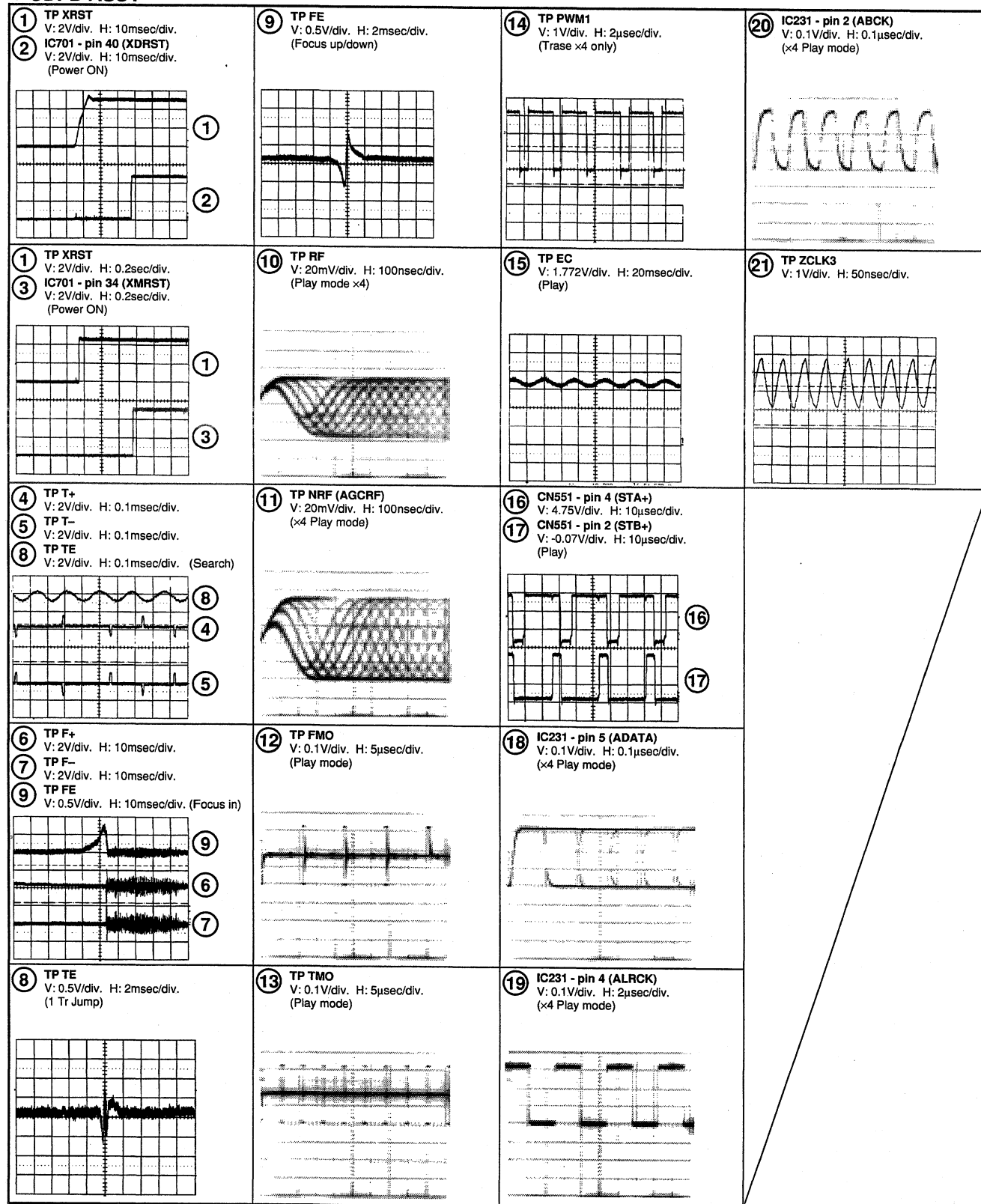
# CMX-5000, CU-V160

## WAVEFORMS and VOLTAGES

Note :

The encircled numbers denote measuring point in the schematic diagram.

### ● CDPB ASSY



• CDPB ASSY

C2/5  
IC201

| Pin No. | Voltage (V) | Pin No. | Voltage (V) |
|---------|-------------|---------|-------------|
| 1       | 0           | 19      | 1.61        |
| 2       | 3.33        | 20      | 2.35        |
| 3       | 4.8         | 21      | 4.8         |
| 4       | 2.35        | 22      | 1.61        |
| 5       | 0           | 23      | 3.16        |
| 6       | 2.35        | 24      | 1.61        |
| 7       | 1.61        | 25      | 1.61        |
| 8       | 2.35        | 26      | 1.61        |
| 9       | 1.61        | 27      | 1.61        |
| 10      | 1.61        | 28      | 0.8         |
| 11      | 3.33        | 29      | 1.61        |
| 12      | 1.61        | 30      | 1.61        |
| 13      | 2.8         | 31      | 2.35        |
| 14      | 0           | 32      | 2.35        |
| 15      | 2.8         | 33      | 2.35        |
| 16      | 0           | 34      | 2.35        |
| 17      | 0           | 35      | 2.35        |
| 18      | 0           | 36      | 2.35        |

C2/5  
IC451

| Pin No. | Voltage (V) | Pin No. | Voltage (V) |
|---------|-------------|---------|-------------|
| 1       | 1.61        | 22      | 2.35        |
| 2       | 8.4         | 23      | 2.35        |
| 3       | 1.61        | 24      | 0           |
| 4       | 2.35        | 25      | 2.35        |
| 5       | 2.35        | 26      | 1.61        |
| 6       | 2.35        | 27      | 8.4         |
| 7       | 4.8         | 28      | 0           |
| 8       | 0           | 29      | 0           |
| 9       | 0           | 30      | 0           |
| 10      | -           | 31      | -           |
| 11      | -           | 32      | -           |
| 12      | -           | 33      | -           |
| 13      | -           | 34      | -           |
| 14      | 2.35        | 35      | 0           |
| 15      | 2.35        | 36      | 4.8         |
| 16      | 2.35        | 37      | 2.35        |
| 17      | 1.61        | 38      | 2.35        |
| 18      | 1.61        | 39      | 2.35        |
| 19      | 1.61        | 40      | 1.61        |
| 20      | 1.61        | 41      | 1.61        |
| 21      | 2.35        | 42      | 1.61        |

C2/5  
IC231

| Pin No. | Voltage (V) | Pin No. | Voltage (V) | Pin No. | Voltage (V) | Pin No. | Voltage (V) |
|---------|-------------|---------|-------------|---------|-------------|---------|-------------|
| 1       | 0           | 26      | 0           | 51      | 1.61        | 76      | 0           |
| 2       | 0 to 3.16   | 27      | 3.16        | 52      | 1.61        | 77      | 0 to 3.16   |
| 3       | 3.16        | 28      | 3.16        | 53      | 1.61        | 78      | 3.16        |
| 4       | 0 to 3.16   | 29      | 0           | 54      | 3.16        | 79      | 0 to 3.16   |
| 5       | 0 to 3.16   | 30      | 0 to 3.16   | 55      | 0           | 80      | 3.16        |
| 6       | 3.16        | 31      | 0           | 56      | 1.61        | 81      | 0 to 3.16   |
| 7       | 1.0 to 2.5  | 32      | 0           | 57      | 1.61        | 82      | 0 to 3.16   |
| 8       | 0 to 3.16   | 33      | 0           | 58      | 1.61        | 83      | 3.16        |
| 9       | 0           | 34      | 0           | 59      | 1.61        | 84      | 3.16        |
| 10      | 0           | 35      | 0 to 1.5    | 60      | 1.61        | 85      | 0 to 3.16   |
| 11      | 0 to 4.8    | 36      | 0 to 3.16   | 61      | 1.61        | 86      | 0 to 3.16   |
| 12      | 0 to 4.8    | 37      | 0 to 3.16   | 62      | 3.16        | 87      | 0 to 4.8    |
| 13      | 0 to 3.16   | 38      | 0 to 3.16   | 63      | 1           | 88      | 2.35        |
| 14      | 0           | 39      | 0 to 3.16   | 64      | 1           | 89      | 0 to 3.16   |
| 15      | 0 to 4.8    | 40      | 0           | 65      | 1           | 90      | 0           |
| 16      | 0 to 4.8    | 41      | 0           | 66      | 1           | 91      | 0           |
| 17      | 0 to 4.8    | 42      | 0           | 67      | 1           | 92      | 0           |
| 18      | 0 to 3.16   | 43      | 2.35        | 68      | 1           | 93      | 3.16        |
| 19      | 0           | 44      | 2.35        | 69      | 1           | 94      | 0           |
| 20      | 0 to 3.16   | 45      | 0           | 70      | 0           | 95      | 0 to 3.16   |
| 21      | 1           | 46      | 0           | 71      | 0           | 96      | 0           |
| 22      | 0 to 3.16   | 47      | 0           | 72      | 1.61        | 97      | 0           |
| 23      | 0 to 3.16   | 48      | 0           | 73      | 3.16        | 98      | 0           |
| 24      | 3.16        | 49      | 1.61        | 74      | 1.61        | 99      | 0 to 3.16   |
| 25      | 0           | 50      | 1.61        | 75      | 0           | 100     | 0 to 3.16   |

C2/5  
IC501

| Pin No. | Voltage (V) | Pin No. | Voltage (V) |
|---------|-------------|---------|-------------|
| 1       | 0           | 16      | 4.8         |
| 2       | 2.2 to 2.6  | 17      | 1.61        |
| 3       | 2.2 to 2.6  | 18      | 1.61        |
| 4       | 0           | 19      | 0           |
| 5       | 2.2 to 2.6  | 20      | 0.613       |
| 6       | 2.2 to 2.6  | 21      | 8.25        |
| 7       | 0.613       | 22      | 8.25        |
| 8       | 2.2 to 2.6  | 23      | 0           |
| 9       | 2.2 to 2.6  | 24      | 0           |
| 10      | 3.16        | 25      | 0           |
| 11      | 4.8         | 26      | 4.0 to 8.25 |
| 12      | 0 to 4.8    | 27      | 4.0 to 8.25 |
| 13      | 3.83        | 28      | 4.0 to 8.25 |
| 14      | 0           | 29      | 0           |
| 15      | 0           | 30      | 0           |

C4/5  
IC303

| Pin No. | Voltage (V) |
|---------|-------------|
| 1       | 0 to 3.0    |
| 2       | 0 to 4.8    |
| 3       | 0 to 3.0    |
| 4       | 0 to 4.8    |
| 5       | 0 to 3.0    |
| 6       | 0 to 4.8    |
| 7       | 0           |
| 8       | 0           |
| 9       | 0           |
| 10      | 0           |
| 11      | 0           |
| 12      | 0           |
| 13      | 0           |
| 14      | 4.8         |

C4/5  
IC351

| Pin No. | Voltage (V) |
|---------|-------------|
| 1       | 0 to 4.8    |
| 2       | 0 to 4.8    |
| 3       | 0 to 4.8    |
| 4       | 0 to 4.8    |
| 5       | 0 to 4.8    |
| 6       | 0 to 4.8    |
| 7       | 0           |
| 8       | 4.8         |
| 9       | 4.8         |
| 10      | 0           |
| 11      | 2.38        |
| 12      | 0           |
| 13      | 2.38        |
| 14      | 0           |
| 15      | 4.8         |
| 16      | 0.8 to 4.8  |
| 17      | 0           |
| 18      | 2.38        |
| 19      | 0           |
| 20      | 4.8         |
| 21      | 3.5         |
| 22      | 4.8         |
| 23      | 0           |
| 24      | 4.8         |
| 25      | 4.8         |
| 26      | 0 to 4.8    |
| 27      | 0 to 4.8    |
| 28      | 4.8         |

C4/5  
IC402

| Pin No. | Voltage (V) | Pin No. | Voltage (V) |
|---------|-------------|---------|-------------|
| 1       | 0           | 23      | 0           |
| 2       | 0           | 24      | 0           |
| 3       | 0           | 25      | 0           |
| 4       | 0           | 26      | 0           |
| 5       | 3.16        | 27      | 0           |
| 6       | 0 to 3.0    | 28      | 0 to 3.0    |
| 7       | 0 to 4.8    | 29      | 0           |
| 8       | 0 to 4.8    | 30      | 0           |
| 9       | 4.8         | 31      | 0           |
| 10      | 0           | 32      | 3.16        |
| 11      | 0           | 33      | 0           |
| 12      | 0           | 34      | 0           |
| 13      | 0           | 35      | 0           |
| 14      | 0           | 36      | 0           |
| 15      | 3.16        | 37      | 0           |
| 16      | 3.16        | 38      | 0           |
| 17      | 0           | 39      | 0           |
| 18      | 0           | 40      | 0           |
| 19      | 0           | 41      | 3.16        |
| 20      | 0           | 42      | 0           |
| 21      | 3.16        | 43      | 0           |
| 22      | 0           | 44      | 0           |

# CMX-5000, CU-V160

**C** 4/5  
IC901

| Pin No. | Voltage (V) | Pin No. | Voltage (V) | Pin No. | Voltage (V) | Pin No. | Voltage (V) |
|---------|-------------|---------|-------------|---------|-------------|---------|-------------|
| 1       | 1.45        | 26      | 0           | 51      | 4.8         | 76      | 0           |
| 2       | 1.45        | 27      | 4.8         | 52      | 4.8         | 77      | 0           |
| 3       | 4.8         | 28      | 0           | 53      | 0           | 78      | 4.8         |
| 4       | 0 to 4.8    | 29      | 0           | 54      | 0           | 79      | 0           |
| 5       | 0 to 4.8    | 30      | 0           | 55      | 0           | 80      | 0           |
| 6       | 0 to 4.8    | 31      | 0           | 56      | 0           | 81      | 4.8         |
| 7       | 0           | 32      | 0           | 57      | 0           | 82      | 4.8         |
| 8       | 0 to 4.8    | 33      | 0           | 58      | 0           | 83      | 0           |
| 9       | 0 to 4.8    | 34      | 0           | 59      | 0           | 84      | 0           |
| 10      | 0 to 4.8    | 35      | 0           | 60      | 0           | 85      | 1           |
| 11      | 0           | 36      | 0           | 61      | 0           | 86      | 0           |
| 12      | 4.8         | 37      | 4.8         | 62      | 0.5 to 4.0  | 87      | 0           |
| 13      | 4.8         | 38      | 4.8         | 63      | 0 to 4.8    | 88      | 1           |
| 14      | 4.8         | 39      | 0           | 64      | 0           | 89      | 2.38        |
| 15      | 4.8         | 40      | 0           | 65      | 0 to 4.8    | 90      | 0           |
| 16      | 0 to 4.8    | 41      | 4.8         | 66      | 0 to 4.8    | 91      | 4.8         |
| 17      | 0           | 42      | 4.8         | 67      | 0           | 92      | 0           |
| 18      | 0           | 43      | 4.8         | 68      | 4.8         | 93      | 0           |
| 19      | 4.8         | 44      | 4.8         | 69      | 0           | 94      | 2.38        |
| 20      | 4.8         | 45      | 0           | 70      | 0           | 95      | 0           |
| 21      | 0           | 46      | 4.8         | 71      | 4.8         | 96      | 1.45        |
| 22      | 0           | 47      | 4.8         | 72      | 0           | 97      | 0           |
| 23      | 4.8         | 48      | 4.8         | 73      | 4.8         | 98      | 4.8         |
| 24      | 4.8         | 49      | 4.8         | 74      | 4.8         | 99      | 1.45        |
| 25      | 0           | 50      | 4.8         | 75      | 0           | 100     | 1.45        |

**C** 4/5  
IC902

| Pin No. | Voltage (V) | Pin No. | Voltage (V) |
|---------|-------------|---------|-------------|
| 1       | 4.8         | 21      | 0           |
| 2       | 0           | 22      | 0 to 4.8    |
| 3       | 0           | 23      | 0 to 4.8    |
| 4       | 0           | 24      | 0 to 4.8    |
| 5       | 0           | 25      | 0 to 4.8    |
| 6       | 4.8         | 26      | 0 to 4.8    |
| 7       | 0           | 27      | 0 to 4.8    |
| 8       | 0           | 28      | 0 to 4.8    |
| 9       | 0           | 29      | 0 to 4.8    |
| 10      | 0           | 30      | 0           |
| 11      | 0           | 31      | 0           |
| 12      | 0           | 32      | 0           |
| 13      | 0 to 4.8    | 33      | 0           |
| 14      | 0 to 4.8    | 34      | 0           |
| 15      | 0           | 35      | 0           |
| 16      | 0 to 4.8    | 36      | 0           |
| 17      | 0 to 4.8    | 37      | 0           |
| 18      | 0 to 4.8    | 38      | 0           |
| 19      | 0 to 4.8    | 39      | 0           |
| 20      | 4.8         | 40      | 0           |

## • TRMB ASSY

**D** 1/3  
IC1003

| Pin No. | Voltage (V) | Pin No. | Voltage (V) |
|---------|-------------|---------|-------------|
| 1       | -8.4        | 15      | 0 to 4.8    |
| 2       | -2.0 to 2.0 | 16      | 0 to 4.8    |
| 3       | -2.0 to 2.0 | 17      | 0           |
| 4       | -2.0 to 2.0 | 18      | 0           |
| 5       | -2.0 to 2.0 | 19      | 0           |
| 6       | 0           | 20      | 0           |
| 7       | -2.0 to 2.0 | 21      | 0           |
| 8       | -2.0 to 2.0 | 22      | 0           |
| 9       | 0           | 23      | 0           |
| 10      | -2.0 to 2.0 | 24      | 0           |
| 11      | -2.0 to 2.0 | 25      | 0           |
| 12      | -2.0 to 2.0 | 26      | 0           |
| 13      | 0           | 27      | 0           |
| 14      | 0           | 28      | 8.4         |

**D** 1/3  
IC1007

| Pin No. | Voltage (V) | Pin No. | Voltage (V) |
|---------|-------------|---------|-------------|
| 1       | -8.4        | 15      | 0 to 4.8    |
| 2       | -1.0 to 1.0 | 16      | 0 to 4.8    |
| 3       | 0           | 17      | 0           |
| 4       | -1.0 to 1.0 | 18      | 0           |
| 5       | -1.0 to 1.0 | 19      | 0           |
| 6       | 0           | 20      | 0           |
| 7       | -1.0 to 1.0 | 21      | 0           |
| 8       | -1.0 to 1.0 | 22      | 0           |
| 9       | 0           | 23      | 0           |
| 10      | -1.0 to 1.0 | 24      | -1.0 to 1.0 |
| 11      | -1.0 to 1.0 | 25      | -1.0 to 1.0 |
| 12      | -1.0 to 1.0 | 26      | -1.0 to 1.0 |
| 13      | 0 to 4.8    | 27      | -1.0 to 1.0 |
| 14      | 0           | 28      | 8.4         |

**I** FLK1 ASSY  
IC2001

| Pin No. | Voltage (V) | Pin No. | Voltage (V) | Pin No. | Voltage (V) | Pin No. | Voltage (V) |
|---------|-------------|---------|-------------|---------|-------------|---------|-------------|
| 1       | -35 to 4.8  | 21      | 0           | 41      | 0           | 61      | -35 to 4.8  |
| 2       | -35 to 4.8  | 22      | 0           | 42      | 0           | 62      | -35 to 4.8  |
| 3       | -35 to 4.8  | 23      | 0           | 43      | 0           | 63      | -35 to 4.8  |
| 4       | -35 to 4.8  | 24      | 0           | 44      | 0           | 64      | -35 to 4.8  |
| 5       | -35 to 4.8  | 25      | 0 to 4.8    | 45      | 0           | 65      | -35 to 4.8  |
| 6       | -35 to 4.8  | 26      | 0 to 4.8    | 46      | 0           | 66      | 0           |
| 7       | -35 to 4.8  | 27      | 2.8         | 47      | 4.8         | 67      | -35 to 4.8  |
| 8       | 4.8         | 28      | 0           | 48      | 0           | 68      | -35 to 4.8  |
| 9       | 0           | 29      | 4.8         | 49      | 7.6         | 69      | -35 to 4.8  |
| 10      | 0           | 30      | 4.8         | 50      | 0           | 70      | 0           |
| 11      | 0           | 31      | 0           | 51      | 0           | 71      | -35.0       |
| 12      | 4.8         | 32      | 4.8         | 52      | 4.8         | 72      | -35 to 4.8  |
| 13      | 0           | 33      | 0           | 53      | -35 to 4.8  | 73      | 0           |
| 14      | 0 to 4.8    | 34      | 0 to 4.8    | 54      | -35 to 4.8  | 74      | -35 to 4.8  |
| 15      | 0 to 4.8    | 35      | 0 to 4.8    | 55      | -35 to 4.8  | 75      | -35 to 4.8  |
| 16      | 0 to 4.8    | 36      | 4.8         | 56      | -35 to 4.8  | 76      | -35 to 4.8  |
| 17      | 4.8         | 37      | 0           | 57      | -35 to 4.8  | 77      | -35 to 4.8  |
| 18      | 0           | 38      | 4.8         | 58      | -35 to 4.8  | 78      | -35 to 4.8  |
| 19      | 0           | 39      | 0           | 59      | -35 to 4.8  | 79      | -35 to 4.8  |
| 20      | 0           | 40      | 0           | 60      | -35 to 4.8  | 80      | -35 to 4.8  |

**K** FLK2 ASSY  
IC2101

| Pin No. | Voltage (V) | Pin No. | Voltage (V) | Pin No. | Voltage (V) | Pin No. | Voltage (V) |
|---------|-------------|---------|-------------|---------|-------------|---------|-------------|
| 1       | -35 to 4.8  | 21      | 0           | 41      | 0           | 61      | -35 to 5.0  |
| 2       | -35 to 4.8  | 22      | 0           | 42      | 4.8         | 62      | -35 to 5.0  |
| 3       | -35 to 4.8  | 23      | 0           | 43      | 0           | 63      | -35 to 5.0  |
| 4       | -35 to 4.8  | 24      | 0           | 44      | 0           | 64      | -35 to 5.0  |
| 5       | -35 to 4.8  | 25      | 0           | 45      | 4.8         | 65      | -35 to 5.0  |
| 6       | -35 to 4.8  | 26      | 4.8         | 46      | 4.8         | 66      | -35 to 5.0  |
| 7       | -35 to 4.8  | 27      | 0           | 47      | 0           | 67      | -35 to 5.0  |
| 8       | 4.8         | 28      | 0           | 48      | 0           | 68      | -35 to 5.0  |
| 9       | 0           | 29      | 4.8         | 49      | 0           | 69      | -35 to 5.0  |
| 10      | 0           | 30      | 4.8         | 50      | 0           | 70      | -35 to 5.0  |
| 11      | 0           | 31      | 0           | 51      | 8.4         | 71      | -35         |
| 12      | 0           | 32      | 4.8         | 52      | 4.8         | 72      | -35 to 5.0  |
| 13      | 0           | 33      | 0           | 53      | -35 to 5.0  | 73      | -35 to 5.0  |
| 14      | 0 to 4.8    | 34      | 0 to 4.8    | 54      | -35 to 5.0  | 74      | -35 to 5.0  |
| 15      | 0 to 4.8    | 35      | 0 to 4.8    | 55      | -35 to 5.0  | 75      | -35 to 5.0  |
| 16      | 0 to 4.8    | 36      | 4.8         | 56      | -35 to 5.0  | 76      | -35 to 5.0  |
| 17      | 4.8         | 37      | 0           | 57      | -35 to 5.0  | 77      | -35 to 5.0  |
| 18      | 0           | 38      | 4.8         | 58      | -35 to 5.0  | 78      | -35 to 5.0  |
| 19      | 0           | 39      | 0           | 59      | -35 to 5.0  | 79      | -35 to 5.0  |
| 20      | 0           | 40      | 4.8         | 60      | -35 to 5.0  | 80      | -35 to 5.0  |

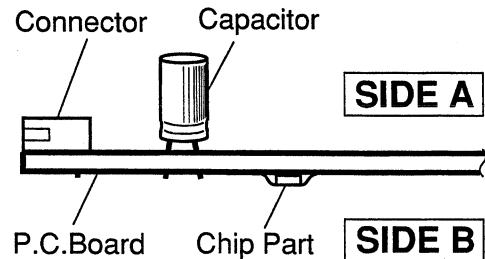
## 4. PCB CONNECTION DIAGRAM

### NOTE FOR PCB DIAGRAMS :

1. Part numbers in PCB diagrams match those in the schematic diagrams.
2. A comparison between the main parts of PCB and schematic diagrams is shown below.

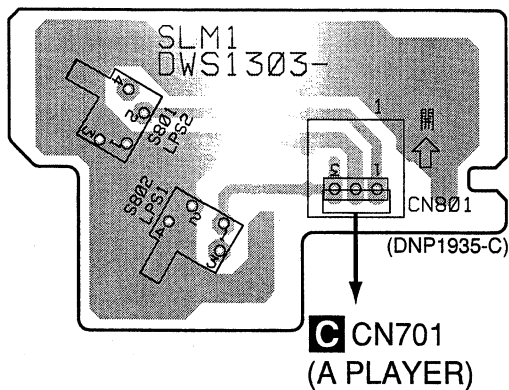
| Symbol In PCB Diagrams | Symbol In Schematic Diagrams | Part Name                |
|------------------------|------------------------------|--------------------------|
|                        |                              | Transistor               |
|                        |                              | Transistor with resistor |
|                        |                              | Field effect transistor  |
|                        |                              | Resistor array           |
|                        |                              | 3-terminal regulator     |

3. The parts mounted on this PCB include all necessary parts for several destinations.
- For further information for respective destinations, be sure to check with the schematic diagram.
4. View point of PCB diagrams.



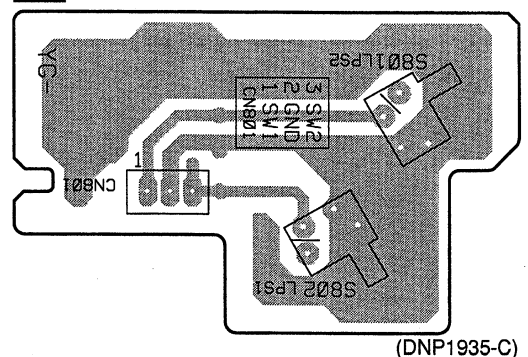
### 4.1 SLM1 and SLM2 ASSYS

#### A SLM1 ASSY



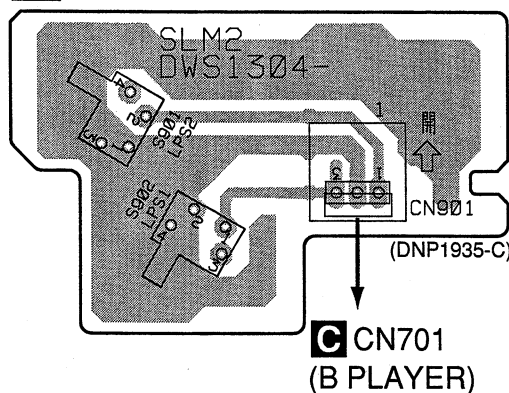
**C** CN701  
(A PLAYER)

#### A SLM1 ASSY



(DNP1935-C)

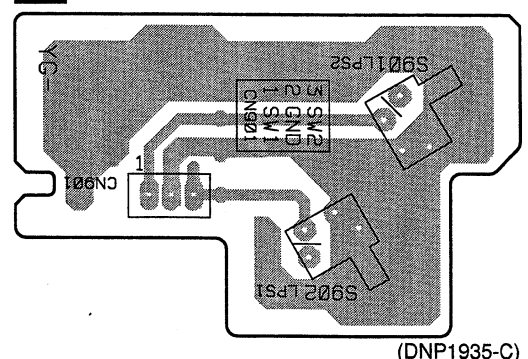
#### B SLM2 ASSY



**C** CN701  
(B PLAYER)

**SIDE A**

#### B SLM2 ASSY



(DNP1935-C)

**SIDE B**

# CMX-5000, CU-V160

## 4.2 CDPB ASSY

### C CDPB ASSY

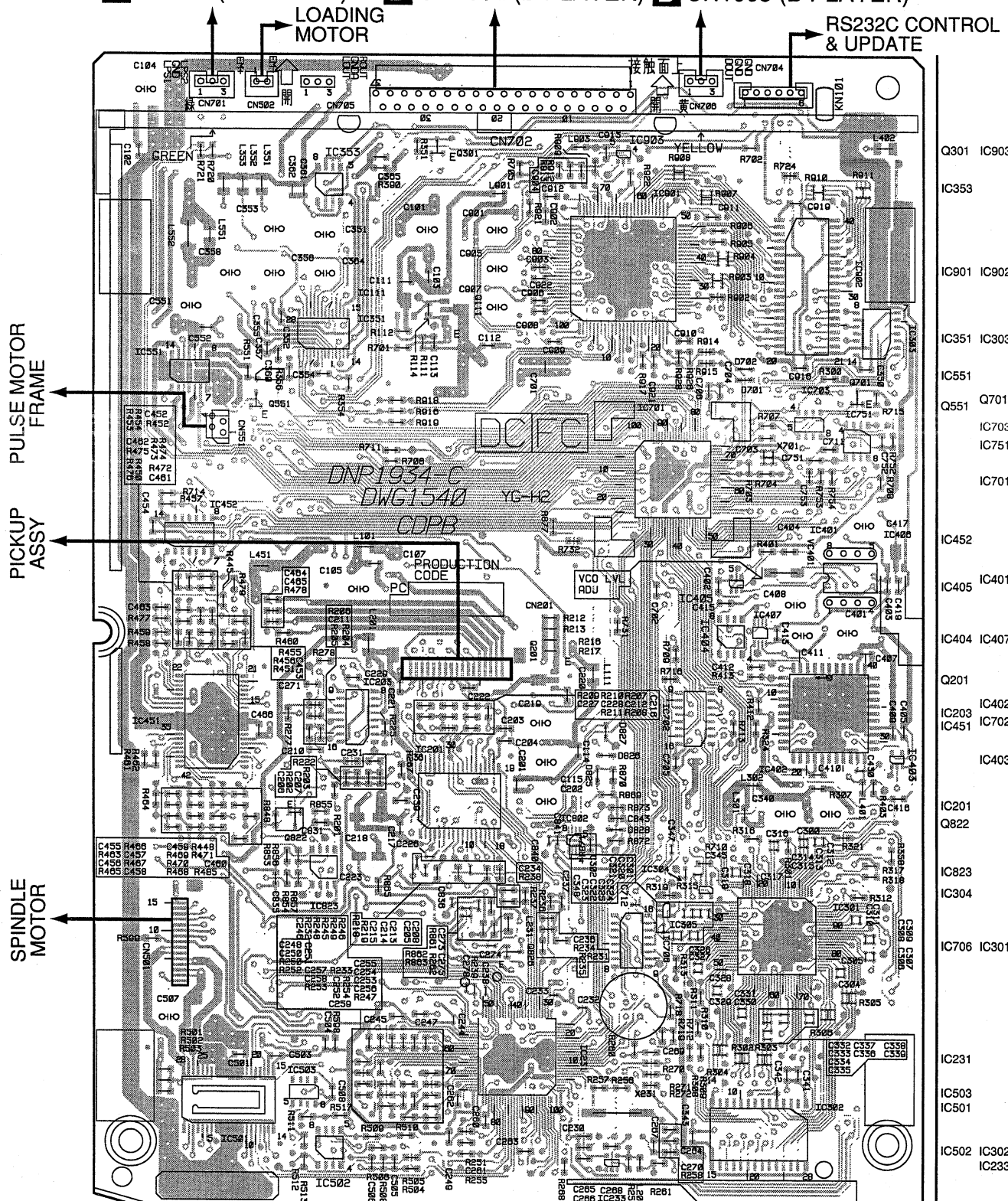
- A** CN801 (A PLAYER)    **D** CN1001 (A PLAYER)    **D** CN1006 (A PLAYER)  
**B** CN901 (B PLAYER)    **D** CN1002 (B PLAYER)    **D** CN1005 (B PLAYER)

A

B

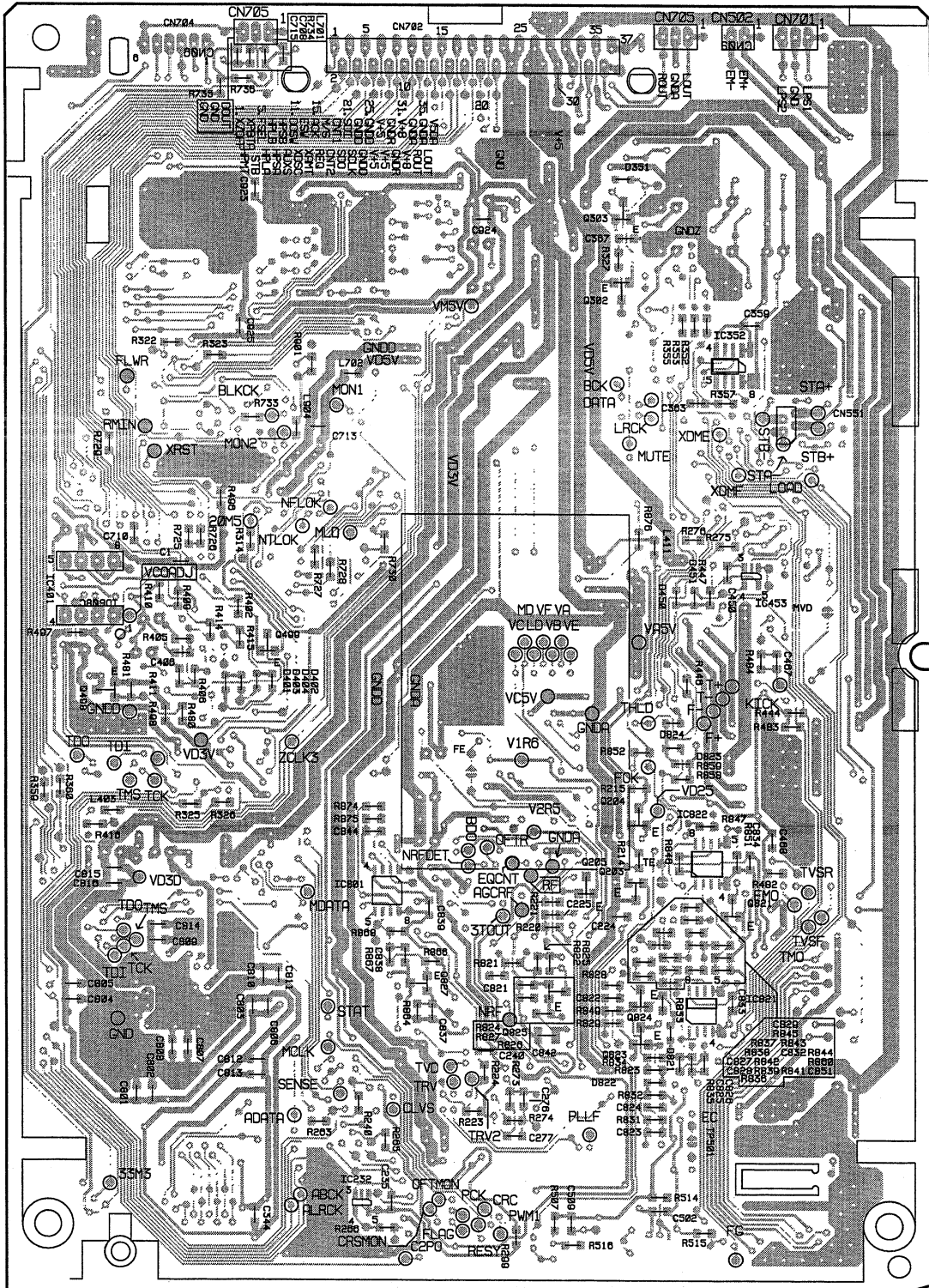
C

D



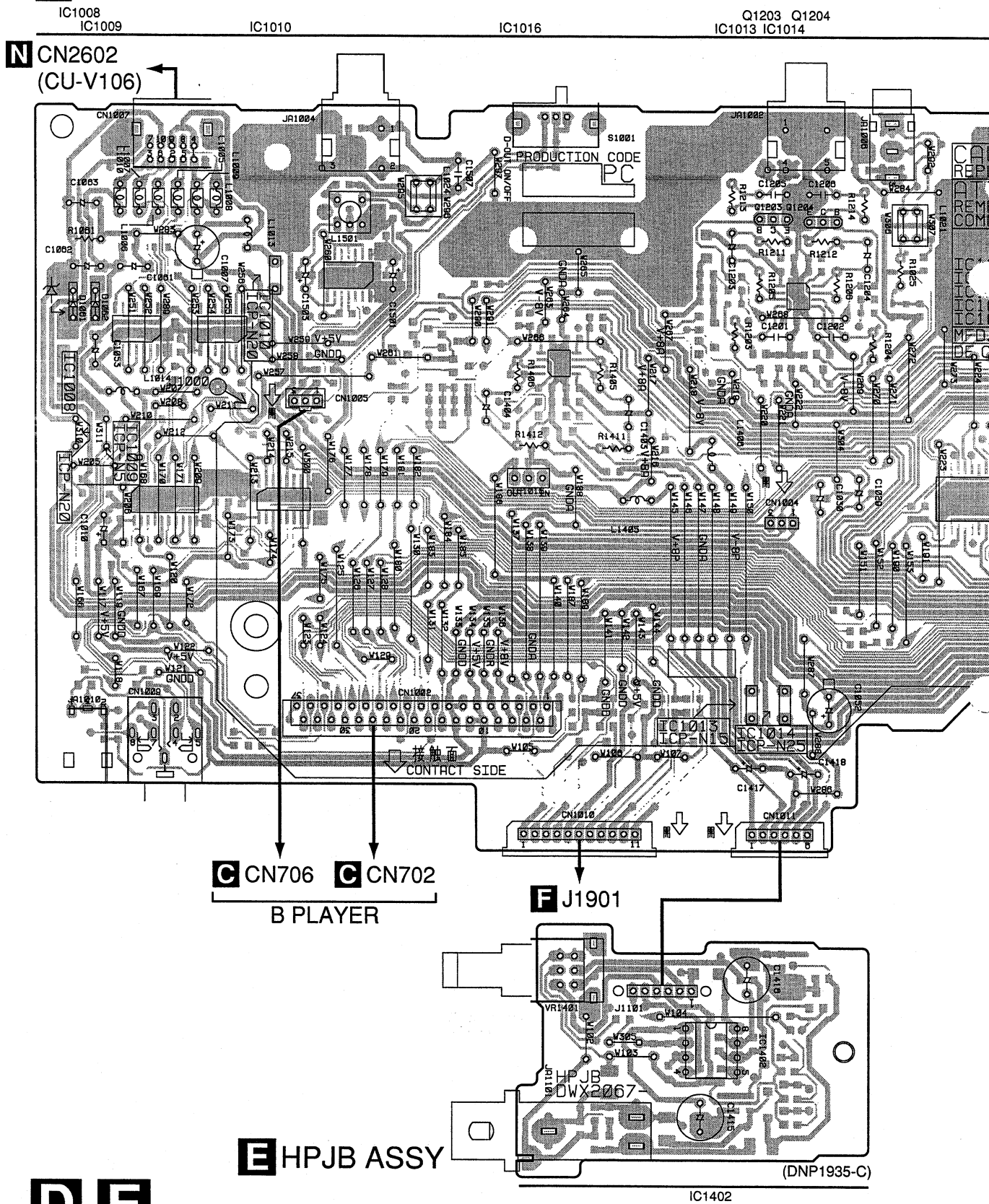
SIDE A

(DNP1934-C)

**C** CDPB ASSY**SIDE B**

(DNP1934-C)

### 4.3 TRMB and HPJB ASSYS

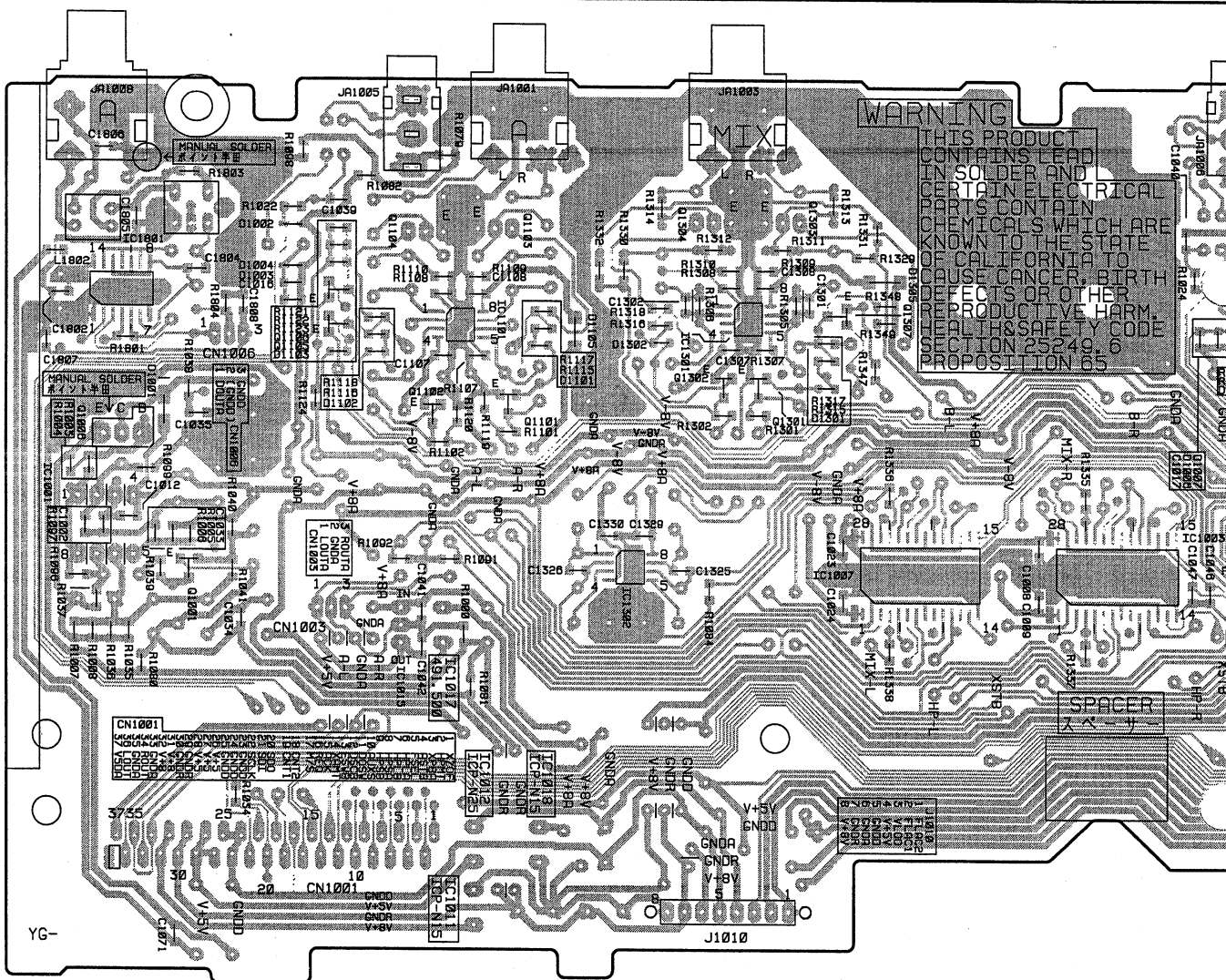
**D** TRMB ASSY



# CMX-5000, CU-V160

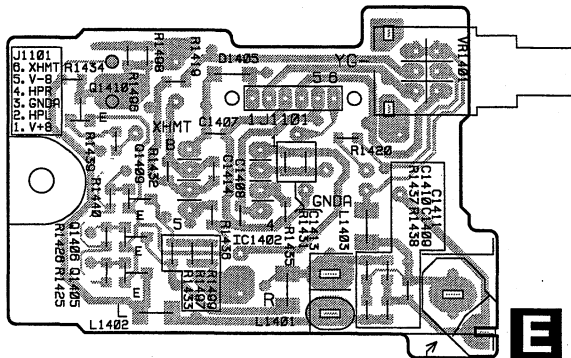
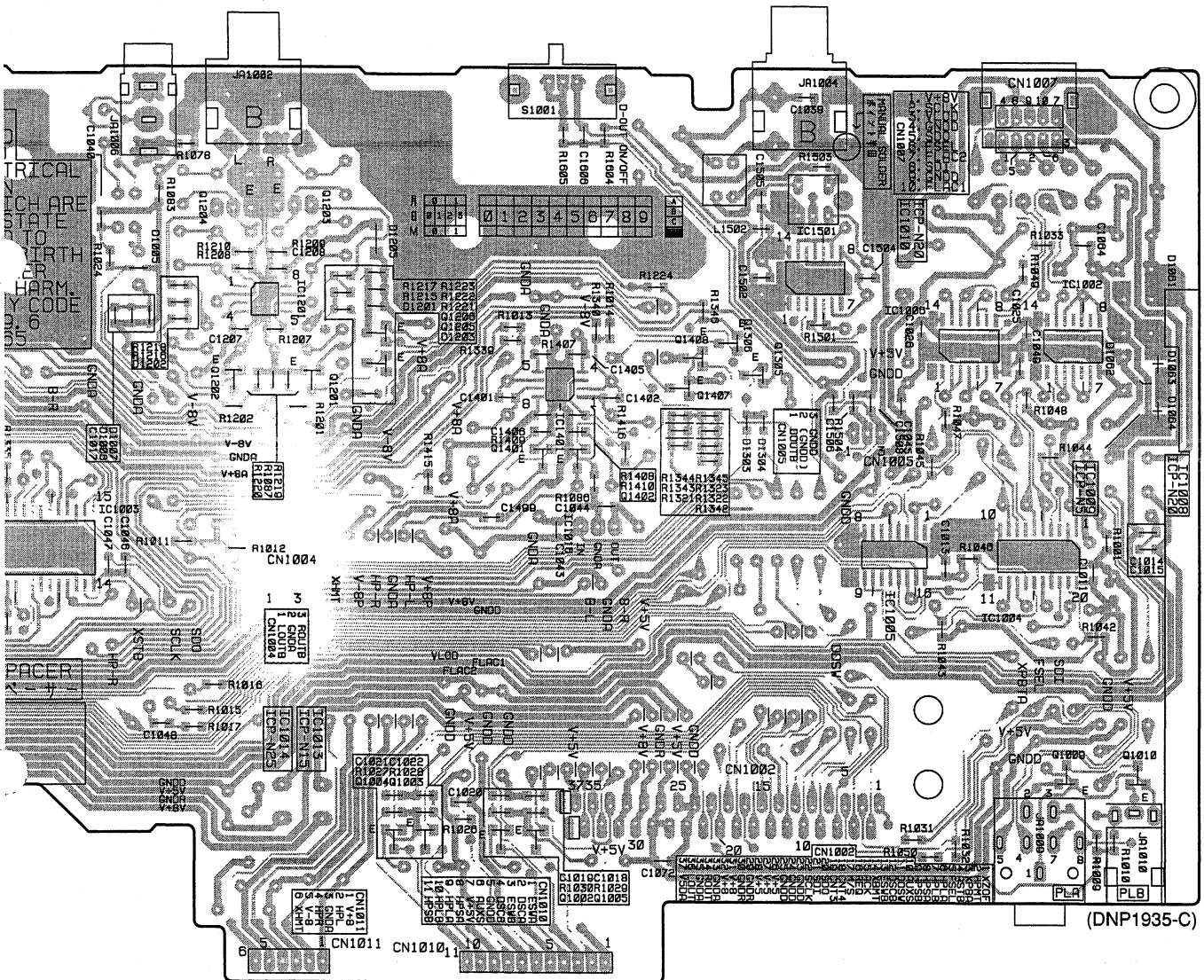
## TRMB ASSY

IC1801 Q1001 Q1106 Q1105 IC1101 Q1102 Q1101 IC1302 Q1302 Q1301 IC1007 IC1003



## CMX-5000, CU-V160

1003 Q1204 Q1203 Q1206 IC1401 Q1401 Q1402 Q1306 IC1501  
 IC1201 Q1205 Q1408 Q1305 IC1006 IC1002  
 Q1202 Q1201 Q1004 Q1003 Q1002 Q1005 Q1407 IC1005 IC1004 Q1009 Q1010



**E** HPJB ASSY

(DNP1935-C)

Q1410 Q1409  
 Q1406  
 Q1405

**D E**

**A**

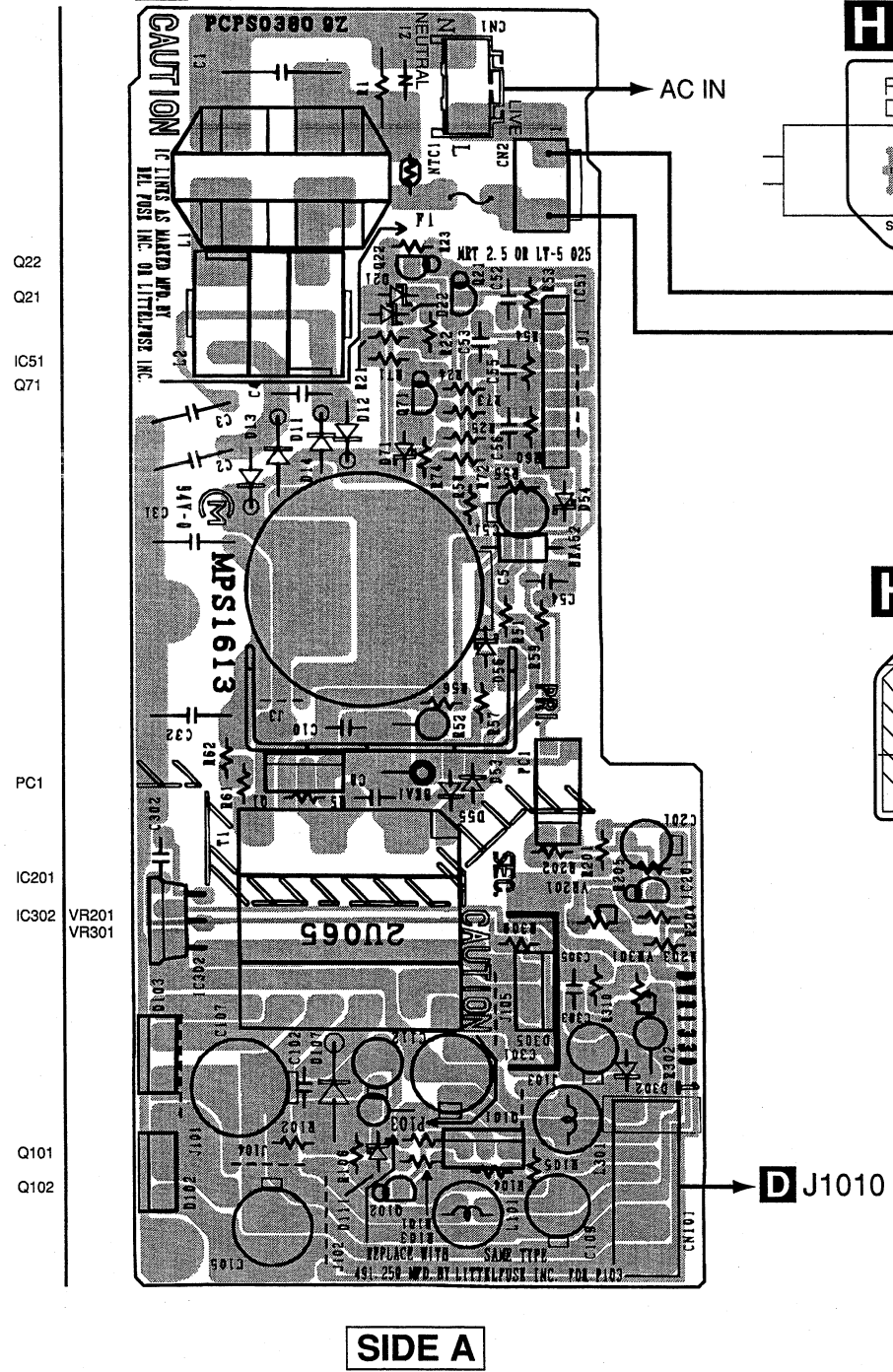
D

52 **F**

## SIDE B

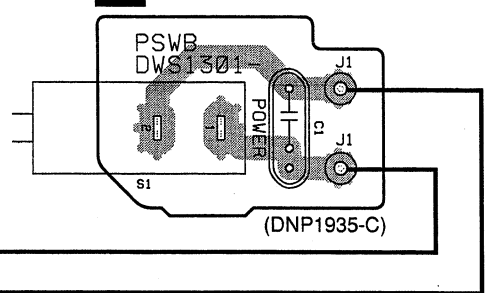
4.5 SW POWER SUPPLY and PSWB ASSYS

**G** SW POWER SUPPLY ASSY



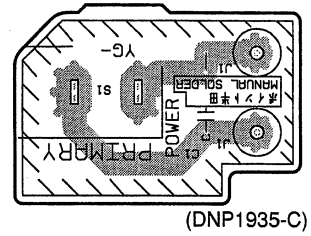
**SIDE A**

**H** PSWB ASSY



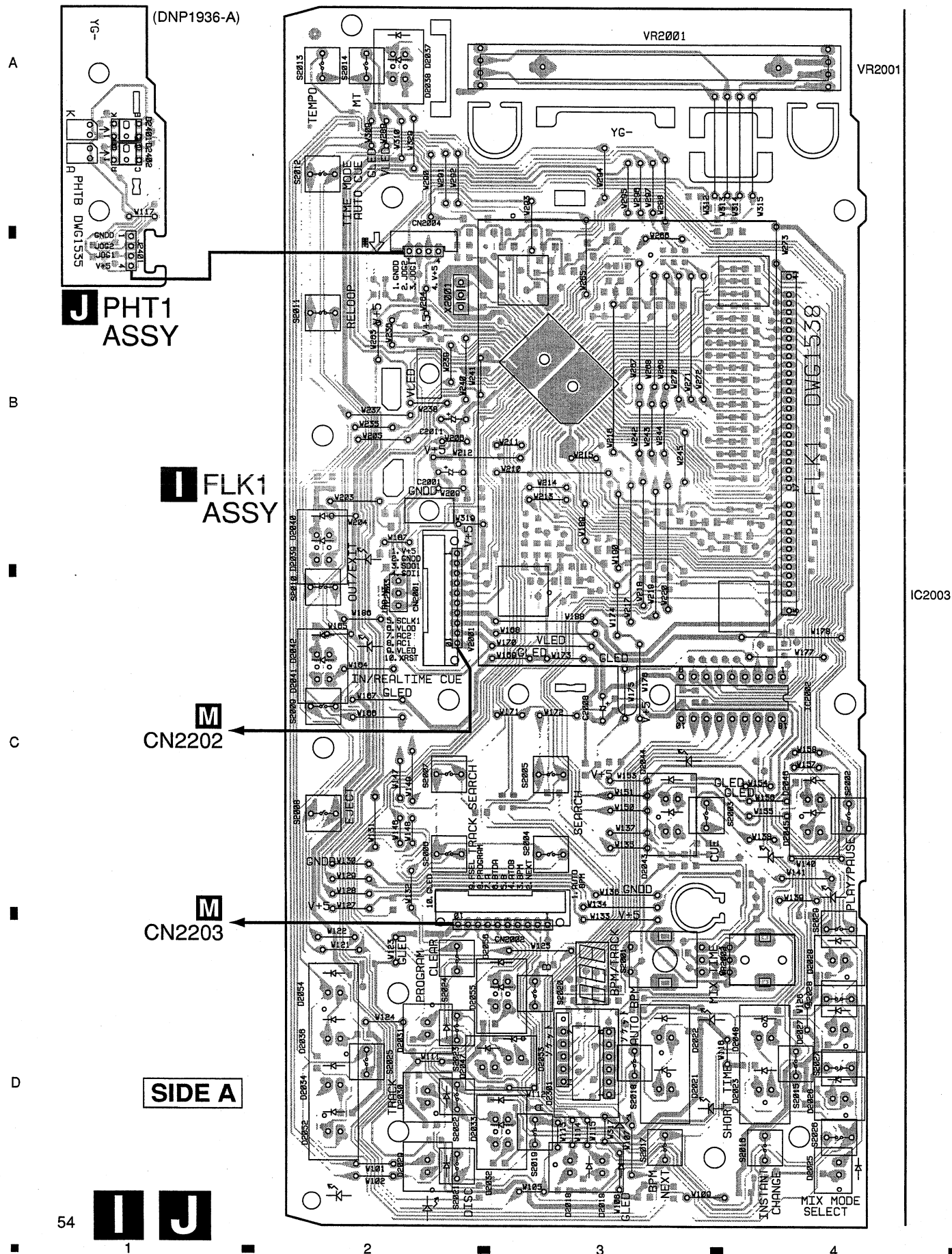
**SIDE A**

**H** PSWB ASSY



**SIDE B**

## 4.6 FLK1 and PHT1 ASSYS



Q2015 Q2016  
Q2003-Q2008

IC2001

Q2002

Q2017-Q2021  
Q2001  
Q2009-Q2011

IC2002

(DNP1936-A)

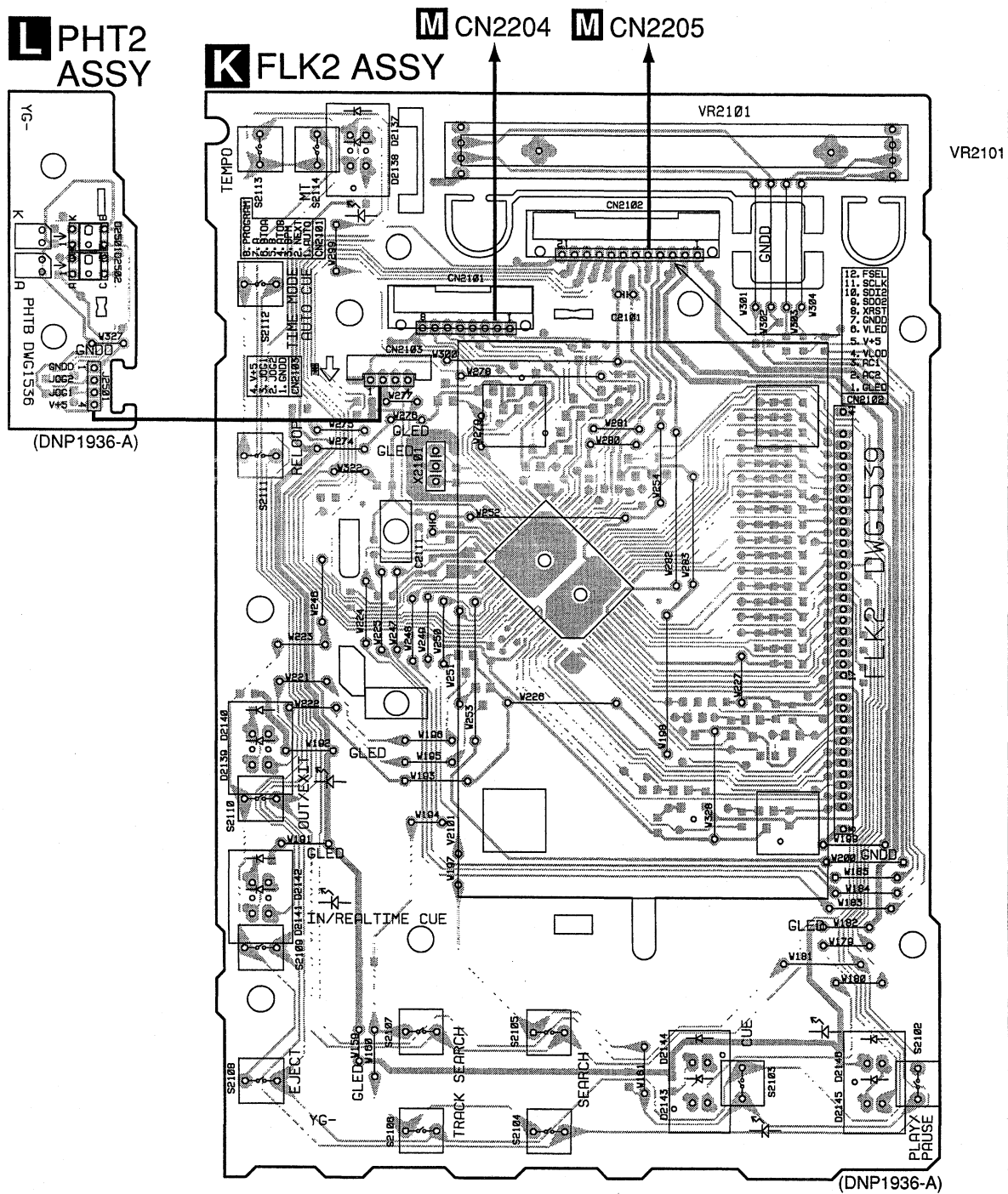
**J** PHT1  
ASSY

**I** FLK1  
ASSY

**SIDE B**

**I J**

## 4.7 FLK2 and PHT2 ASSYS



**SIDE A**





(DNP1936-A)

**M** CNNB  
ASSY

**D**  
CN1007

**K**  
CN2101

**K**  
CN2102

**I**  
CN2002

**I**  
CN2001

## SIDE A



(DNP1936-A)

**M** CNNB  
ASSY

IC2203

IC2202

IC2201

WARNING  
THIS PRODUCT CONTAINS LEAD IN  
OLDER AND CERTAIN ELECTRICAL  
PARTS CONTAIN CHEMICALS WHICH  
ARE KNOWN TO THE STATE OF  
CALIFORNIA TO CAUSE CANCER,  
BIRTH DEFECTS OR OTHER  
REPRODUCTIVE HARM.  
HEALTH & SAFETY CODE SECTION  
5249.6 - PROPOSITION 65

## SIDE B

## 5. PCB PARTS LIST

NOTES: ●Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.

●The  $\Delta$  mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

●When ordering resistors, first convert resistance values into code form as shown in the following examples.

Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).

560  $\Omega$   $\rightarrow$   $56 \times 10^1$   $\rightarrow$  561 ..... RD1/4PU 5 6 1 J

47k  $\Omega$   $\rightarrow$   $47 \times 10^3$   $\rightarrow$  473 ..... RD1/4PU 4 7 3 J

0.5  $\Omega$   $\rightarrow$  R50 ..... RN2H R 5 0 K

1  $\Omega$   $\rightarrow$  1R0 ..... RS1P 1 R 0 K

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62k  $\Omega$   $\rightarrow$   $562 \times 10^1$   $\rightarrow$  5621 ..... RN1/4PC 5 6 2 1 F

| Mark                      | No. | Description          | Part No. |
|---------------------------|-----|----------------------|----------|
| <b>LIST OF ASSEMBLIES</b> |     |                      |          |
|                           |     | CDPB ASSY            | DWG1540  |
|                           |     | JACB ASSY            | DWM2113  |
|                           |     | — SLM1 ASSY          | DWS1303  |
|                           |     | — SLM2 ASSY          | DWS1304  |
|                           |     | — TRMB ASSY          | DWX2066  |
|                           |     | — HPJB ASSY          | DWX2067  |
|                           |     | — SELB ASSY          | DWS1302  |
|                           |     | — PSWB ASSY          | DWS1301  |
| $\Delta$                  |     | SW POWER SUPPLY ASSY | DWR1330  |
| NSP                       |     | REMOTE CONTROLLER    | CU-V160  |
|                           |     | — DISP ASSY          | DWM2114  |
|                           |     | — FLK1 ASSY          | DWG1538  |
|                           |     | — PHT1 ASSY          | DWG1535  |
|                           |     | — FLK2 ASSY          | DWG1539  |
|                           |     | — PHT2 ASSY          | DWG1536  |
|                           |     | — CNNB ASSY          | DWG1534  |
|                           |     | — CTJB ASSY          | DWG1537  |

### **A** SLM1 ASSY

#### SWITCHES

S801, S802 DSG1017

#### OTHERS

CN801 KR CONNECTOR (3P) S3B-PH-K

### **B** SLM2 ASSY

#### SWITCHES

S901, S902 DSG1017

#### OTHERS

CN901 KR CONNECTOR (3P) S3B-PH-K

| Mark                  | No. | Description                       | Part No.            |
|-----------------------|-----|-----------------------------------|---------------------|
| <b>C CDPB ASSY</b>    |     |                                   |                     |
| <b>SEMICONDUCTORS</b> |     |                                   |                     |
|                       |     | IC501                             | AN8483NSB           |
|                       |     | IC201                             | AN8847SB            |
|                       |     | IC801, IC823                      | BA10393F            |
|                       |     | IC401                             | BA7042              |
|                       |     | IC203, IC702, IC706               | BU4053BCF           |
|                       |     | IC902                             | GLT44016-40J4       |
|                       |     | IC551                             | LB1836M             |
|                       |     | IC751                             | M51953BFP           |
|                       |     | IC111                             | M5237ML             |
|                       |     | IC451                             | M56783AFP           |
|                       |     | IC901                             | MN19413A-PP         |
|                       |     | IC231                             | MN662754CEA         |
|                       |     | IC302                             | MSM51V17805D-60TS-K |
|                       |     | IC502, IC822                      | NJM2904M            |
|                       |     | IC821                             | NJM4580ED           |
|                       |     | IC406                             | NJM78L05UA          |
|                       |     | IC701                             | PD3426A9            |
|                       |     | IC351                             | PE8001A             |
|                       |     | IC402                             | PE9009A             |
|                       |     | IC503                             | TC4W53F             |
|                       |     | IC303                             | TC74HCT7007AF       |
|                       |     | IC304                             | TC7S04F             |
|                       |     | IC453                             | TC7S32F             |
|                       |     | IC232                             | TC7SET08F           |
|                       |     | IC233, IC305, IC403, IC405, IC903 | TC7SU04F            |
|                       |     | IC703                             | TC7W32F             |
|                       |     | IC802                             | TC7W53FU            |
|                       |     | IC407                             | TC7WT241FU          |
|                       |     | IC352                             | TC7WU04F            |
|                       |     | IC301                             | XCB56364            |
|                       |     | Q203, Q498, Q821, Q823, Q827      | 2SA1037K            |
|                       |     | Q111, Q201                        | 2SB1132             |
|                       |     | Q204, Q824, Q826                  | 2SC2412K            |
|                       |     | Q205                              | 2SC3837K            |
|                       |     | Q825                              | 2SD2114K            |
|                       |     | Q301, Q822                        | DTA124EK            |
|                       |     | Q499                              | DTC115EK            |
|                       |     | Q551, Q701                        | DTC124EK            |
|                       |     | D351, D450, D451, D821-D828       | 1SS355              |

# CMX-5000, CU-V160

| Mark No.     | Description              | Part No.     |
|--------------|--------------------------|--------------|
| <b>COILS</b> |                          |              |
|              | L111,L201,L351-L353,L402 | DTL1024      |
|              | L551                     | DTL1024      |
|              | L231                     | LCTA100J2520 |
|              | L101                     | OTL1009      |
| Δ            | L202,L401,L403           | PTL1014      |
|              | L301,L302                | PTL1014      |
|              | L411,L701,L702,L901      | PTL1014      |
|              | L903,L904                | PTL1014      |

## CAPACITORS

|                          |              |
|--------------------------|--------------|
| C258,C824,C826,C821,C822 | CCSQCH101J50 |
| C264,C265                | CCSQCH120J50 |
| C455,C457                | CCSQCH121J50 |
| C273                     | CCSQCH180J50 |
| C206                     | CCSQCH181J50 |
| C801,C803,C805,C808-C810 | CCSQCH221J50 |
| C812,C815,C843           | CCSQCH221J50 |
| C210                     | CCSQCH331J50 |
| C212                     | CCSQCH470J50 |
| C275                     | CCSQCH5R0C50 |
| C207                     | CCSQCH680J50 |
| C304,C306,C308,C310,C312 | CCSRCH101J50 |
| C314,C316,C318,C320,C322 | CCSRCH101J50 |
| C324,C326,C328,C330,C332 | CCSRCH101J50 |
| C334,C336,C338           | CCSRCH101J50 |
| C430                     | CCSRCH330J50 |
| C274                     | CCSRCH560J50 |
| C105,C115                | CEAL101M6R3  |
| C202,C219                | CEAL470M6R3  |
| C101,C901                | CEAT101M10   |
| C104                     | CEJA101M16   |
| C401,C551                | CEJA101M6R3  |
| C408                     | CEJA1R0M50   |
| C411                     | CEJA220M10   |
| C353,C356,C358           | CEJA221M6R3  |
| C507                     | CEJA330M10   |
| C300,C340,C351,C364,C417 | CEJA470M6R3  |
| C905                     | CEJA470M6R3  |
| C223                     | CEV100M16    |
| C218                     | CEV470M6R3   |
| C113,C234,C247,C253,C257 | CKSQYB102K50 |
| C363                     | CKSQYB102K50 |
| C102,C103,C107,C114,C201 | CKSQYB103K50 |
| C211,C217,C220,C224,C229 | CKSQYB103K50 |
| C235,C240,C266,C268,C269 | CKSQYB103K50 |
| C341,C344,C350,C352      | CKSQYB103K50 |
| C354,C355,C357,C359,C360 | CKSQYB103K50 |
| C362,C402-C405,C450      | CKSQYB103K50 |
| C466,C467,C501-C503,C508 | CKSQYB103K50 |
| C552,C701-C706,C710,C711 | CKSQYB103K50 |
| C715,C752,C753,C802,C804 | CKSQYB103K50 |
| C806,C807,C811,C813,C814 | CKSQYB103K50 |
| C816,C833-C835,C844,C902 | CKSQYB103K50 |
| C904,C906,C908-C913      | CKSQYB103K50 |
| C921,C922,C924,C925      | CKSQYB103K50 |
| C112,C203,C204,C221,C222 | CKSQYB104K25 |
| C225,C230,C245,C248-C251 | CKSQYB104K25 |
| C256,C260-C263,C365      | CKSQYB104K25 |
| C406,C407,C409,C410,C413 | CKSQYB104K25 |
| C419,C751,C828,C829,C839 | CKSQYB104K25 |

| Mark No. | Description              | Part No.     |
|----------|--------------------------|--------------|
|          | C851,C916,C919           | CKSQYB104K25 |
|          | C214,C215,C254,C271      | CKSQYB105K10 |
|          | C903                     | CKSQYB105K10 |
|          | C823,C825                | CKSQYB122K50 |
|          | C505,C837                | CKSQYB152K50 |
|          | C216,C453                | CKSQYB182K50 |
|          | C459                     | CKSQYB222K50 |
|          | C236,C237,C246,C252,C461 | CKSQYB223K50 |
|          | C463                     | CKSQYB223K50 |
|          | C231                     | CKSQYB224K16 |
|          | C208                     | CKSQYB272K50 |
|          | C205                     | CKSQYB273K50 |
|          | C838                     | CKSQYB332K50 |
|          | C456,C458                | CKSQYB333K50 |
|          | C239,C462,C504           | CKSQYB393K50 |
|          | C831                     | CKSQYB472K50 |
|          | C255,C259,C452           | CKSQYB474K16 |
|          | C827,C832                | CKSQYB474K16 |
|          | C347                     | CKSRYB102K50 |
|          | C302,C305,C307,C309,C311 | CKSRYB103K50 |
|          | C313,C315,C317,C319,C321 | CKSRYB103K50 |
|          | C323,C325,C327,C329,C331 | CKSRYB103K50 |
|          | C333,C335,C337,C339,C345 | CKSRYB103K50 |
|          | C348,C712                | CKSRYB103K50 |
|          | C232,C233,C238,C244,C836 | CKSRYB104K16 |
|          | C841                     | CKSRYB104K16 |
|          | C278                     | CKSRYB152K50 |
|          | C213                     | CKSRYB273K16 |
|          | C301,C840                | CKSRYB562K50 |
|          | C842                     | CSZSR100M16  |
|          | VC401 (40pF)             | VCM1010      |

## RESISTORS

|                          |              |
|--------------------------|--------------|
| R903,R904                | RA4C101J     |
| R910,R911                | RA4C473J     |
| R464,R465,R467,R468,R851 | RS1/10S1002F |
| R848                     | RS1/10S3902F |
| R112                     | RS1/10S4301F |
| R214                     | RS1/10S51R0F |
| R463,R466                | RS1/10S6202F |
| R111                     | RS1/10S6801F |
| R215                     | RS1/10S9100F |
| R315                     | RS1/16S101J  |
| R861                     | RS1/16S102J  |
| R239                     | RS1/16S103J  |
| R218,R219                | RS1/16S152J  |
| R862,R863                | RS1/16S473J  |
| Other Resistors          | RS1/10S□□□□  |

## OTHERS

|       |                                |            |
|-------|--------------------------------|------------|
| CN501 | CONNECTOR (15P)                | 52207-1590 |
| CN201 | CONNECTOR (17P)                | 52207-1790 |
| CN502 | KR CONNECTOR (2P)              | B2B-PH-K-S |
| CN701 | KR CONNECTOR (3P)              | B3B-PH-K   |
| CN706 | KR CONNECTOR (3P)              | B3B-PH-K-Y |
| CN704 | KR CONNECTOR (6P)              | B6B-PH-K-S |
|       | PC BOARD CDPB                  | DNP1934    |
| X701  | CHIP CERAMIC RESONATOR (20MHz) | DSS1110    |
| CN702 | FFC CONNECTOR (37P)            | HLEM37R-1  |
| X231  | CRYSTAL RESONATOR (33.8MHz)    | RSS1055    |
| CN551 | 4P FFC CONNECTOR               | VKN1235    |
| KN101 | EARTH METAL FITTING            | VNF1084    |

| Mark                  | No.                                | Description  | Part No. |
|-----------------------|------------------------------------|--------------|----------|
| <b>D TRMB ASSY</b>    |                                    |              |          |
| <b>SEMICONDUCTORS</b> |                                    |              |          |
| △                     | IC1017 (0.5A)                      | AEK7005      |          |
|                       | IC1005                             | BU4053BCF    |          |
| △                     | IC1011,IC1013,IC1018 (0.6A)        | ICP-N15      |          |
| △                     | IC1010 (0.8A)                      | ICP-N20      |          |
| △                     | IC1012,IC1014 (1A)                 | ICP-N25      |          |
|                       | IC1001                             | IR3M03A      |          |
| △                     | IC1101,IC1201,IC1301,IC1302,IC1401 | NJM4558MD    |          |
|                       | IC1015,IC1016                      | NJM78L05A    |          |
|                       | IC1002,IC1006                      | TC74AC04F    |          |
|                       | IC1004                             | TC74HC241AF  |          |
|                       | IC1501,IC1801                      | TC74HCU04AF  |          |
|                       | IC1003,IC1007                      | TC9162AF     |          |
|                       | Q1101,Q1102,Q1201,Q1202            | 2SD2114K     |          |
|                       | Q1301,Q1302,Q1401,Q1402            | 2SD2114K     |          |
|                       | Q1103,Q1104,Q1203,Q1204            | 2SD2144S     |          |
|                       | Q1303,Q1304                        | 2SD2144S     |          |
|                       | Q1002-Q1005,Q1105,Q1205,Q1305      | DTA124EK     |          |
|                       | Q1407,Q1408                        | DTA124EK     |          |
|                       | Q1009,Q1010,Q1106,Q1206,Q1306      | DTC124EK     |          |
|                       | Q1307                              | DTC124EK     |          |
|                       | D1105,D1205,D1305                  | 1SR154-400   |          |
|                       | D1003,D1006,D1101-D1103            | 1SS355       |          |
|                       | D1201-D1203,D1301-D1304            | 1SS355       |          |
|                       | D1001                              | EC10QS04     |          |
|                       | D1061,D1062                        | MTZJ5.1C     |          |
|                       | D1002,D1004,D1005,D1007            | UDZS10B      |          |
| <b>COILS</b>          |                                    |              |          |
|                       | L1001 (470μH)                      | DTL1083      |          |
|                       | L1405,L1406                        | LFA101J      |          |
|                       | L1002-L1004                        | LFA470J      |          |
|                       | L1501,L1801                        | PTL1003      |          |
|                       | L1502,L1802                        | PTL1014      |          |
| △                     | L1021,L1022                        | PTL1017      |          |
| △                     | L1005-L1010                        | VTH1020      |          |
| <b>SWITCH</b>         |                                    |              |          |
|                       | S1001                              | DSH1025      |          |
| <b>CAPACITORS</b>     |                                    |              |          |
|                       | C1046,C1047,C1049,C1301,C1302      | CCSQCH101J50 |          |
|                       | C1325,C1326,C1401,C1402            | CCSQCH101J50 |          |
|                       | C1012                              | CCSQCH201J50 |          |
|                       | C1303,C1304                        | CEANP101M6R3 |          |
|                       | C1027-C1030,C1103,C1104            | CEANP220M16  |          |
|                       | C1203,C1204,C1327,C1328            | CEANP220M16  |          |
|                       | C1403,C1404                        | CEANP220M16  |          |
|                       | C1062                              | CEAT100M50   |          |
|                       | C1006                              | CEAT101M10   |          |
|                       | C1001                              | CEAT101M16   |          |
|                       | C1501,C1801                        | CEAT101M6R3  |          |
|                       | C1003                              | CEAT331M16   |          |
|                       | C1503,C1803                        | CEAT470M10   |          |
|                       | C1061                              | CEAT470M50   |          |
|                       | C1007,C1051,C1052,C1417,C1418      | CEAT471M10   |          |
|                       | C1031,C1032                        | CEAT471M16   |          |
|                       | C1036                              | CEAT471M6R3  |          |
|                       | C1507,C1809                        | CGCYX104M25  |          |
|                       | C1048                              | CKSQYB102K50 |          |
|                       | C1041,C1043,C1508,C1808            | CKSQYB103K50 |          |

| Mark             | No.                           | Description   | Part No. |
|------------------|-------------------------------|---------------|----------|
|                  | C1008,C1009,C1011,C1013       | CKSQYB104K25  |          |
|                  | C1016-C1026,C1034,C1038-C1040 | CKSQYB104K25  |          |
|                  | C1042,C1044,C1107,C1108       | CKSQYB104K25  |          |
|                  | C1207,C1208,C1307,C1308       | CKSQYB104K25  |          |
|                  | C1329,C1330,C1405,C1406,C1502 | CKSQYB104K25  |          |
|                  | C1504,C1606,C1802,C1804,C1806 | CKSQYB104K25  |          |
|                  | C1101,C1102,C1105,C1106       | CQMA152J50    |          |
|                  | C1201,C1202,C1205,C1206       | CQMA152J50    |          |
|                  | C1305,C1306                   | CQMA152J50    |          |
| <b>RESISTORS</b> |                               |               |          |
|                  | R1061,R1327,R1328,R1405,R1406 | RD1/4VM103J   |          |
|                  | R1325,R1326                   | RD1/4VM203J   |          |
|                  | R1105,R1106,R1205,R1206       | RD1/4VM223J   |          |
|                  | R1305,R1306                   | RN1/10SE2202D |          |
|                  | R1023,R1025                   | RD1/4VM271J   |          |
|                  | R1103,R1104,R1111-R1114       | RD1/4VM471J   |          |
|                  | R1203,R1204,R1211-R1214       | RD1/4VM471J   |          |
|                  | R1411,R1412                   | RD1/4VM471J   |          |
|                  | R1311-R1314                   | RN1/10SE4700D |          |
|                  | R1329-R1332                   | RN1/10SE5100D |          |
|                  | R1303,R1304                   | RD1/4VM752J   |          |
|                  | R1006                         | RS1/10S2002F  |          |
|                  | R1005                         | RS1/10S3601F  |          |
|                  | Other Resistors               | RS1/10S□□□□   |          |
| <b>OTHERS</b>    |                               |               |          |
|                  | CABLE HOLDER (8P)             | 51052-0800    |          |
|                  | CN1011 6P JUMPER CONNECTOR    | 52151-0610    |          |
|                  | CN1009 MINI JACK              | AKN1028       |          |
|                  | CN1007 10P MINI DIN SOCKET    | AKP7031       |          |
|                  | CN1005,CN1006                 | B3B-PH-K-Y    |          |
|                  | KR CONNECTOR (3P)             |               |          |
|                  | JA1010 MINI JACK              | DKN1146       |          |
|                  | J1010 JUMPER WIRE             | DXUY0830E     |          |
|                  | CN1001,CN1002                 | HLEM37S-1     |          |
|                  | FFC CONNECTOR 37P             |               |          |
|                  | JA1004,JA1008 1P JACK         | PKB1028       |          |
|                  | JA1001-JA1003 2P PIN JACK     | PKB1032       |          |
|                  | JA1005,JA1006 JACK (REMOTE)   | RKN1004       |          |

## **E HPJB ASSY**

### **SEMICONDUCTORS**

|                   |                         |              |
|-------------------|-------------------------|--------------|
|                   | IC1402                  | NJM4556AD    |
|                   | Q1405,Q1406,Q1409,Q1410 | 2SC3326      |
|                   | D1405                   | 1SR154-400   |
| <b>COILS</b>      |                         |              |
| △                 | L1401-L1403             | LCTA1R0J3225 |
| <b>CAPACITORS</b> |                         |              |
|                   | C1413,C1414             | CCSQCH820J50 |
|                   | C1415,C1416             | CEANP221M16  |
|                   | C1409-C1411             | CKSQYB103K50 |
|                   | C1407,C1408             | CKSQYB104K25 |
| <b>RESISTORS</b>  |                         |              |
|                   | VR1401 (10kΩ-B)         | DCS1058      |
|                   | Other Resistors         | RS1/10S□□□□  |

## CMX-5000, CU-V160

| Mark          | No. | Description     | Part No.    |
|---------------|-----|-----------------|-------------|
| <b>OTHERS</b> |     |                 |             |
|               |     | 6P CABLE HOLDER | 51048-0600  |
| J1101         |     | JUMPER WIRE     | D20PYY0620E |
| JA1101        |     | HEADPHONE JACK  | RKN1002     |

### **F** SELB ASSY SEMICONDUCTORS

|             |              |
|-------------|--------------|
| D1903,D1904 | EMAY3864X-HM |
| D1701,D1901 | SLP3118C51H  |
| D1902       | SLP9118C51H  |

### SWITCHES

|                   |         |
|-------------------|---------|
| S1701,S1902-S1904 | ASG7013 |
| S1901             | DSH1049 |

### CAPACITOR

|       |              |
|-------|--------------|
| C1901 | CKSQYB104K25 |
|-------|--------------|

### RESISTORS

|               |             |
|---------------|-------------|
| All Resistors | RS1/10S□□□□ |
|---------------|-------------|

### OTHERS

|       |                  |             |
|-------|------------------|-------------|
|       | 11P CABLE HOLDER | 51048-1100  |
| J1901 | JUMPER WIRE 11P  | D20PYY1120E |

### **G** SW POWER SUPPLY ASSY

There is no service parts.

### **H** PSWB ASSY

#### SWITCH

|      |         |
|------|---------|
| △ S1 | PSA-009 |
|------|---------|

#### CAPACITOR

|      |         |
|------|---------|
| △ C1 | ACG7033 |
|------|---------|

#### OTHERS

|      |         |
|------|---------|
| △ J1 | DKP3516 |
|------|---------|

### **I** FLK1 ASSY SEMICONDUCTORS

|                               |              |
|-------------------------------|--------------|
| IC2002                        | LB1740       |
| IC2001                        | PE5127A      |
| IC2003                        | S-806D       |
| Q2003,Q2009-Q2011,Q2017-Q2021 | 2SC2412K     |
| Q2001,Q2002,Q2012-Q2014       | DTA124EK     |
| Q2004-Q2008,Q2015,Q2016       | DTC124EK     |
| D2001-D2017,D2049-D2051,D2057 | 1SS355       |
| D2021-D2023,D2025-D2034       | EMAY3864X-HM |
| D2036-D2042,D2047,D2048       | EMAY3864X-HM |
| D2052-D2056                   | EMAY3864X-HM |
| D2301                         | LB-303VK222  |
| D2043,D2044                   | MAY5364X     |
| D2045,D2046                   | SLP3118C51H  |
| D2018,D2019                   | SLP9118C51H  |

| Mark            | No. | Description | Part No. |
|-----------------|-----|-------------|----------|
| <b>SWITCHES</b> |     |             |          |
|                 |     | S2004-S2029 | ASG7013  |
|                 |     | S2002,S2003 | DSG1063  |
|                 |     | S2001       | DSX1056  |

### CAPACITORS

|                               |              |
|-------------------------------|--------------|
| C2001,C2011                   | CEAL470M6R3  |
| C2004,C2005,C2010,C2012,C2013 | CKSQYB103K50 |
| C2015                         | CKSQYB103K50 |
| C2002,C2009                   | CKSQYB104K25 |

### RESISTORS

|                 |             |
|-----------------|-------------|
| VR2002 (10kΩ-B) | DCS1059     |
| VR2001 (50kΩ-B) | DCV1011     |
| Other Resistors | RS1/10S□□□□ |

### OTHERS

|               |                             |             |
|---------------|-----------------------------|-------------|
| X2001         | CERAMIC RESONATOR (4.19MHz) | VSS1014     |
| CN2004        | 4P JUMPER CONNECTOR         | 52147-0410  |
| V2001         | FL INDICATOR TUBE           | DEL1033     |
|               | IC SOCKET 6P                | DKN1203     |
| CN2001,CN2002 | B TO B CONNECTOR            | TKC-A10X-B1 |

### **J** PHT1 ASSY SEMICONDUCTORS

|             |        |
|-------------|--------|
| D2401,D2402 | GP1S94 |
|-------------|--------|

### CAPACITOR

|       |              |
|-------|--------------|
| C2401 | CKSQYB103K50 |
|-------|--------------|

### RESISTORS

|               |             |
|---------------|-------------|
| All Resistors | RS1/10S□□□□ |
|---------------|-------------|

### OTHERS

|       |                |             |
|-------|----------------|-------------|
| J2401 | JUMPER WIRE 4P | D20PWY0405E |
|-------|----------------|-------------|

### **K** FLK2 ASSY SEMICONDUCTORS

|                   |              |
|-------------------|--------------|
| IC2101            | PE5127A      |
| Q2125-Q2129       | 2SC2412K     |
| Q2113-Q2116,Q2124 | DTA124EK     |
| Q2112,Q2117-Q2123 | DTC124EK     |
| D2108-D2117       | 1SS355       |
| D2137-D2142       | EMAY3864X-HM |
| D2143,D2144       | MAY5364X     |
| D2145,D2146       | SLP3118C51H  |

### SWITCHES

|             |         |
|-------------|---------|
| S2104-S2114 | ASG7013 |
| S2102,S2103 | DSG1063 |

### CAPACITORS

|             |              |
|-------------|--------------|
| C2101       | CEAL101M6R3  |
| C2111       | CEAL220M6R3  |
| C2110,C2115 | CKSQYB103K50 |
| C2102       | CKSQYB104K25 |

| Mark | No. | Description | Part No. |
|------|-----|-------------|----------|
|------|-----|-------------|----------|

#### RESISTORS

|                 |             |
|-----------------|-------------|
| VR2101 (50kΩ-B) | DCV1011     |
| Other Resistors | RS1/10S□□□J |

#### OTHERS

|                                   |             |
|-----------------------------------|-------------|
| X2101 CERAMIC RESONATOR (4.19MHz) | VSS1014     |
| CN2103 4P JUMPER CONNECTOR        | 52147-0410  |
| V2101 FL INDICATOR TUBE           | DEL1033     |
| CN2101 B TO B CONNECTOR           | TKC-A08X-B1 |
| CN2102 B TO B CONNECTOR           | TKC-A12X-B1 |

### L PHT2 ASSY

#### SEMICONDUCTORS

|             |        |
|-------------|--------|
| D2501,D2502 | GP1S94 |
|-------------|--------|

#### CAPACITOR

|       |              |
|-------|--------------|
| C2501 | CKSQYB103K50 |
|-------|--------------|

#### RESISTORS

|               |             |
|---------------|-------------|
| All Resistors | RS1/10S□□□J |
|---------------|-------------|

#### OTHERS

|                      |             |
|----------------------|-------------|
| J2501 JUMPER WIRE 4P | D20PWY0405E |
|----------------------|-------------|

### M CNNB ASSY

#### SEMICONDUCTORS

|          |             |
|----------|-------------|
| △ IC2203 | BA05T       |
| IC2202   | TC74AC04F   |
| IC2201   | TC74HC241AF |

#### CAPACITORS

|                   |              |
|-------------------|--------------|
| C2208,C2209,C2221 | CCSQCH101J50 |
| C2204             | CEJA101M10   |
| C2202             | CEJA101M6R3  |
| C2201,C2203,C2210 | CKSQYB104K25 |

#### RESISTORS

|               |             |
|---------------|-------------|
| All Resistors | RS1/10S□□□J |
|---------------|-------------|

#### OTHERS

|                                    |                        |
|------------------------------------|------------------------|
| 10P CABLE HOLDER                   | 51048-1000             |
| J2201 JUMPER WIRE 10P              | D20PDY1025E            |
| CN2204 CONNECTOR PLUG              | TKC-A08P-B1            |
| CN2202,CN2203 CONNECTOR PLUG       | TKC-A10P-B1            |
| CN2205 B TO B CONNECTOR PCB BINDER | TKC-A12P-B1<br>VEF1040 |

### N CTJB ASSY

#### CAPACITOR

|       |              |
|-------|--------------|
| C2601 | CKSQYB104K25 |
|-------|--------------|

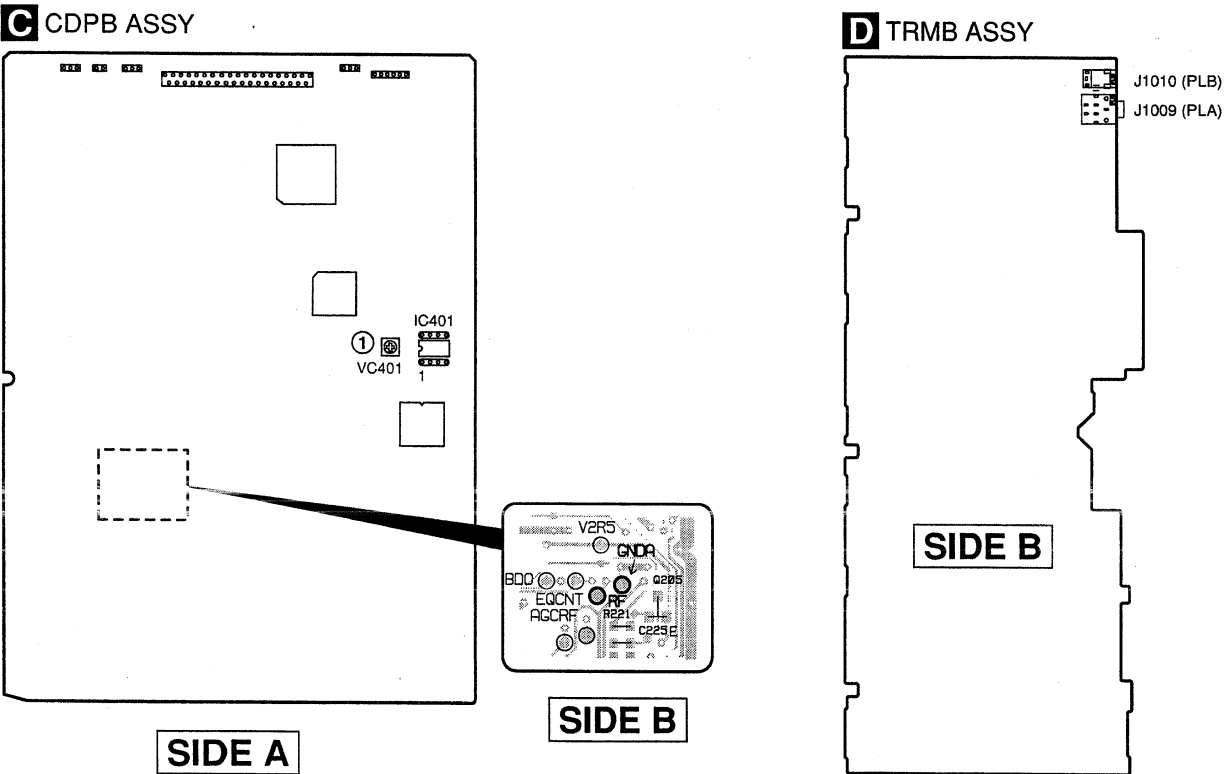
#### OTHERS

|                            |         |
|----------------------------|---------|
| CN2602 10P MINI DIN SOCKET | AKP7031 |
|----------------------------|---------|

6. ADJUSTMENT

6.1 ADJUSTMENT ITEMS AND LOCATION

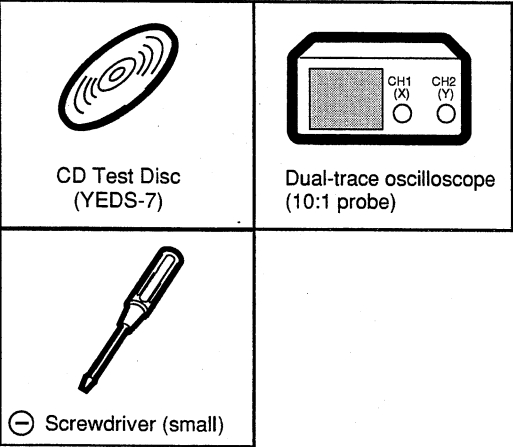
■ Adjustment Points (PCB Part)



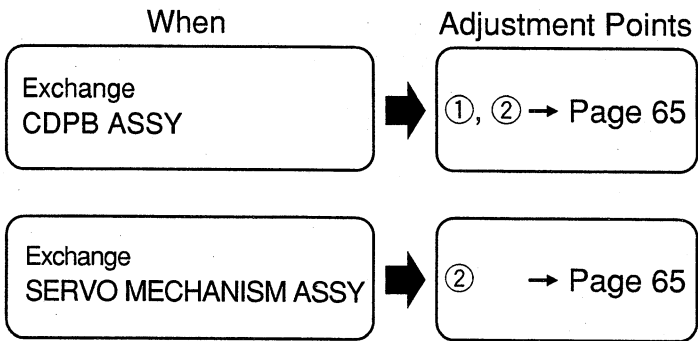
■ Adjustment Items

- [Electrical Part]
- ① VCO Free-running Adjustment
  - ② RF Level Adjustment

6.2 JIGS AND MEASURING INSTRUMENTS



6.3 NECESSARY ADJUSTMENT POINTS

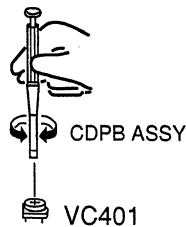


## 6.4 ELECTRICAL ADJUSTMENT

### ① VCO Free-running Adjustment

Note: Adjustment of VC401 may not be made if the SLOT-IN MECHANISM ASSY is installed. Before adjustment, remove the SLOT-IN MECHANISM ASSY..

- Power ON
- None disc

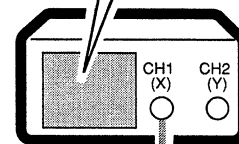


Objective : To optimize the VCO free-running frequency

When not properly adjusted :

- Master Tempo does not function normally
- The output does not appear in indication and occasion when turned a Tempo adjustment into + side.

DC voltage  
 $2.5 \pm 0.2V$



Oscilloscope  
V: 50mV/div.  
H: 10msec/div.  
DC mode

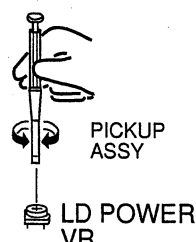
START

CDPB ASSY  
IC401 - pin 1  
GND 777

Probe (10:1)

### ② RF Level Adjustment

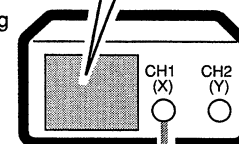
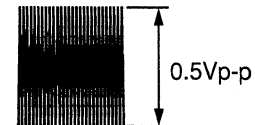
- Test mode  
Enter the RF ADJ mode by pressing "C-MODE" button on the remote control unit for servicing.
- Move the pickup to the RF ADJ position (disc outer circumference) by pressing the "PLAY" button on the remote control unit for servicing.



Objective : To adjust the amplitude of playback RF signal

When not properly adjusted :

Player does not playback, track search is impossible.



Oscilloscope  
V: 50mV/div.  
H: 10msec/div.  
AC mode

START

CDPB ASSY  
RF  
GNDA  
SIDE B

Probe (10:1)

Remote control unit for servicing (RU-V101)

TRMB ASSY

JA1009 (PLA)  
JA1010 (PLB)

Player

## 7. GENERAL INFORMATION

### 7.1 DIAGNOSIS

#### 7.1.1 TEST MODE

##### 7.1.1.1 Outline of the Test Mode

Three kinds of test modes (Mode 1-3) are prepared.

#### (1) Confirm the button and display function of the Controller with the test mode

**Mode 1** When connect the Controller to the Player, and confirm it.

**Mode 2** When confirm it with Controller being simple (use DC power supply). However, FL cannot confirm.

#### (2) Confirm the button display function and movement of the Player, with the test mode

**Mode 3** When connect the remote control unit (RU-V101) for service only with the player, and confirm it.

#### 7.1.1.2 How to enter the test mode of the controller, and the function that can confirm with the test mode

##### (1) How to enter the test mode

###### Mode 1

Enter the test mode when power is turned on while pressing the PLAYER SELECT A and B buttons of monitor section of the player. Indication of the controller becomes as follows. (Refer to Fig. 2.)

"TEST" is indicated by time display part of the FL. TRACK (Fig. 2 - ①), TEMPO (Fig. 2- ③), M S F (Fig. 2- ⑥ ⑦ ⑧ ), calendar indication "1" (Fig. 2- ⑩), REMAIN (Fig. 2- ④),  $\pm 16$  (Fig. 2- ②), BPM (Fig. 2- ⑪) and : (Fig. 2- ⑮) are lighted in the FL indication.

BPM/TRACK number indication (three columns of LED) and the AUTO MIX PLAY button of the controller light.

###### Mode 2

When confirm the function only with the Controller

Use a DC (direct current) power supply, and connect GND and VLOD of land for the test mode of CNNB Assy to ground together and connect +7V to a power supply (+7V  $\pm$  1V).

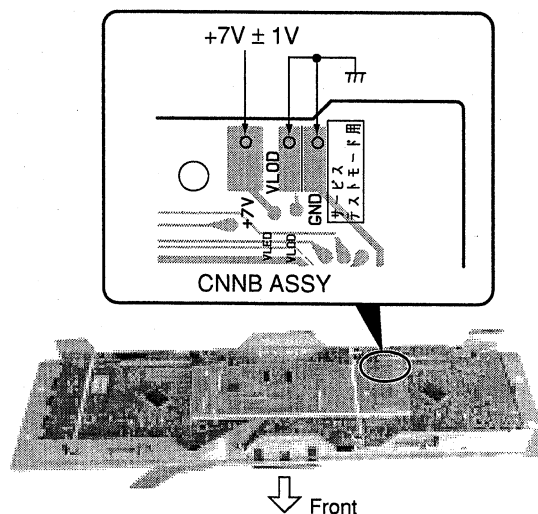
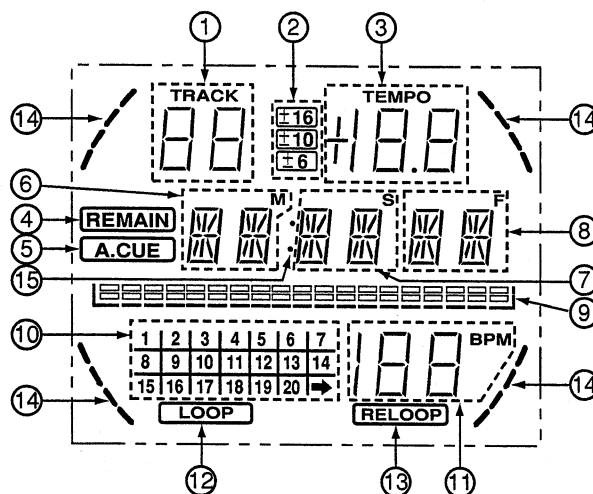


Fig.2 Land position for the test mode

Following LEDs blink less than about 1 second when inputs DC power supply while pressing the TEMPO button and AUTO MIX PLAY button of the PLAYER A simultaneously. (CUE, PLAY/PAUSE, LOOP IN•LOOP OUT and MT LED)

LEDs of BPM/TRACK No. indication (three columns of LED) and AUTO MIX PLAY turns on, and become the test mode. However, FL does not light.



- |                                                 |                                         |
|-------------------------------------------------|-----------------------------------------|
| ① TRACK No. indication                          | ⑨ Music performance position indication |
| ② Tempo setting ( $\pm 6 \cdot 10 \cdot 16\%$ ) | ⑩ Calendar indication                   |
| ③ Tempo setting ( $\pm 6$ to $16\%$ )           | ⑪ BPM indication                        |
| ④ REMAIN indication                             | ⑫ LOOP indication                       |
| ⑤ AUTO CUE indication                           | ⑬ RELOOP indication                     |
| ⑥ MINUTES (time indication)                     | ⑭ Player indication at AUTO MIX PLAY    |
| ⑦ SECONDS (time indication)                     | ⑮ Colon                                 |
| ⑧ FRAMES (frame indication)                     |                                         |

Fig. 2 FL indication for Mode 1

## (2) The function that can confirm (controller section)

Perform the following movement with the function button of the product.

### Mode 1

1. EJECT button:  
Indicate "EJECT" in the time indication segment section of FL, and lights/turns off the light whenever pressing the button.
2. TRACK SEARCH button:  
TRACK No. in FL indication (Fig. 2-①) and number of the calendar (Fig. 2-⑩) do UP/DOWN in sequence.  
TRACK : 00, 11, 22, ....., 99, 00, .....  
Calendar : 1, 2, 3, ..... 20, → 1, .....
3. SEARCH button:  
Indication of music performance position indication (Fig. 2-⑨) changes at the same time that the value of MIN • SEC • FRAME in FL indication (Fig. 2-⑥ ⑦ ⑧ ) changes like next.  
00:0000, ..... 99:9999, XX:XXXX, ..... ZZ:ZZZZ
4. CUE button:  
Lights/turns off the light whenever pressing the button.
5. PLAY/PAUSE button:  
Lights/turns off the light whenever pressing the button.
6. TIME MODE button:  
A. CUE (Fig. 2-⑤) and REMAIN of FL indication (Fig. 2-④) indicate it in alternately whenever pressing the button, and turn on.
7. TEMPO button:  
± 16, ± 10 and ± 6 of FL indication (Fig. 2-②) turn on sequentially whenever pressing the button.
8. MASTER TEMPO button:  
MT button lights/turns off the light.
9. RELOOP button:  
Lights/turns off the "RELOOP" of the FL indication whenever pressing the button.
10. IN/REALTIME CUE button:  
Lights/turns off the IN/REALTIME CUE button and "LOOP" (Fig. 2-⑫) of the FL indication whenever pressing the button.
11. OUT/EXIT button:  
Lights/turns off the OUT/EXIT button whenever pressing the button.
12. JOG:  
A segment in FL indication (Fig. 2 -⑭) flashes according to the direction to turn.
13. Slider:  
A value of TEMPO and BPM (Fig. 2-③, ⑪) in FL indication change by moving the slider to + direction and - direction as follows.

### • TEMPO

|             |       |      |       |        |
|-------------|-------|------|-------|--------|
| + direction | +1.1  | +2.2 | ..... | +10.0  |
| Center      | 0.0   |      |       |        |
| - direction | - 1.1 | -2.2 | ..... | - 10.0 |

### • BPM

|             |    |    |       |     |
|-------------|----|----|-------|-----|
| + direction | 11 | 22 | ..... | 100 |
| Center      | 00 |    |       |     |
| - direction | 11 | 22 | ..... | 100 |

### 14. CLEAR button of PLAY MODE SELECT:

Following LEDs turn on sequentially whenever pressing the button.

AUTO MIX PLAY, DISC, TRACK, PROGRAM, A, <, >, B, BPM, NEXT, BPM SYNC, SHORT TIME, Cut in button, ZIP button, Echo button, Cross fade button

### 15. Perform 1 to 9 and A to F indication corresponding to a figure of 1 of BPM/TRACK No. indication (three digits of LED) by pressing the following buttons.

|                        |       |
|------------------------|-------|
| AUTO MIX PLAY button   | : [1] |
| DISC button            | : [2] |
| TRACK button           | : [3] |
| PROGRAM button         | : [4] |
| PLAYER SELECT A button | : [5] |
| PLAYER SELECT B button | : [6] |
| BPM/NEXT button        | : [7] |
| BPM SYNC button        | : [8] |
| PUSH ENTER button      | : [9] |
| INSTANT CHANGE button  | : [A] |
| SHORT TIME button      | : [b] |
| Cut in button          | : [C] |
| ZIP button             | : [d] |
| Echo button            | : [E] |
| Cross fade button      | : [F] |

### 16. BPM/TRACK knob:

A number of 0-9 is indicated sequentially in the figure of 10 of BPM/TRACK No. indication of center part (three digits of LED) as turns it.

### 17. MIX TIME:

A number of 0-9 is indicated sequentially in the figure of 100 of BPM/TRACK No. indication (three digits of LED) as turns it.

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## Mode 2

1. EJECT button:  
While pressing a button, an IN/REAL TIME CUE button of pressed the player side lights up.
2. TRACK SEARCH BACK button:  
While pressing a button, an IN/REAL TIME CUE button of pressed the player side lights up.

### TRACK SEARCH FWD button:

While pressing a button, an OUT/EXIT button of pressed the player side lights up.

3. SEARCH BACK button:  
While pressing a button, an IN/REAL TIME CUE button of pressed the player side lights up.

### SEARCH FWD button:

While pressing a button, an OUT/EXIT button of pressed the player side lights up.

4. CUE button:  
While pressing a button, a CUE button of pressed the player side lights up.

5. PLAY/PAUSE button:  
While pressing a button, a PLAY/PAUSE button of pressed the player side lights up.

6. TIME MODE button:  
While pressing a button, an OUT/EXIT button of pressed the player side lights up.

7. TEMPO button:  
While pressing a button, an OUT/EXIT button of pressed the player side lights up.

8. MASTER TEMPO button:  
While pressing a button, a MASTER TEMPO button of pressed the player side lights up.

9. RELOOP button:  
While pressing a button, an OUT/EXIT button of pressed the player side lights up.

10. IN/REALTIME CUE button:  
While pressing a button, an IN/REAL TIME CUE button of pressed the player side lights up.

11. OUT/EXIT button:  
While pressing a button, an OUT/EXIT button of pressed the player side lights up.

## 12. JOG

BACK : An IN/REALTIME CUE button of correspondence player side lights up.

FWD : An OUT/EXIT button lights up in the same way.  
(Turn off the lights when you stop the rotation of the JOG dial.)

## 13. slider:

An IN/REALTIME CUE button lights up during movement of the slider. Turn off the light after 0.5 second.

\* AUTO MIX PLAY section is the same as that of **Mode 1**.  
(steps 14 to 17).

## (3) The function that can confirm (Player section)

### Mode 1

1. LED of EJECT:  
Both players of A and B always flashes on and off.
2. EJECT button:  
Eject the DISC.
3. PLAYER SELECT button of the monitor section:  
Both LEDs of A and B players turn on whenever pressing the button, and turn off the light.
4. Audio output select switch (A/B • MIX):  
LED of monitor A turns on when switch is selected to A•B side.  
LED of monitor B turns on when switch is selected to A•B AUTO MIX side.
5. Digital out ON/OFF switch:  
Sound does not out when pressing the PLAY button of **Mode 3** with OFF (in fourfold speed playback) state, and sound outputs by ON (in normal speed playback) state.

\* As for the lighting of A and B button LEDs, mode 3 takes first priority.

### 7.1.1.3 How to enter the test mode of the player, and the function that can confirm with the test mode

#### (1) How to enter the test mode

##### Mode 3

Enter the test mode when the power is on while pressing the PLAYER SELECT A and B buttons of monitor section of the player. Connect the remote control unit (RU-V101) for service to JA1009 (A PLAYER) or JA1010 (B PLAYER) of the TRMB Assy.

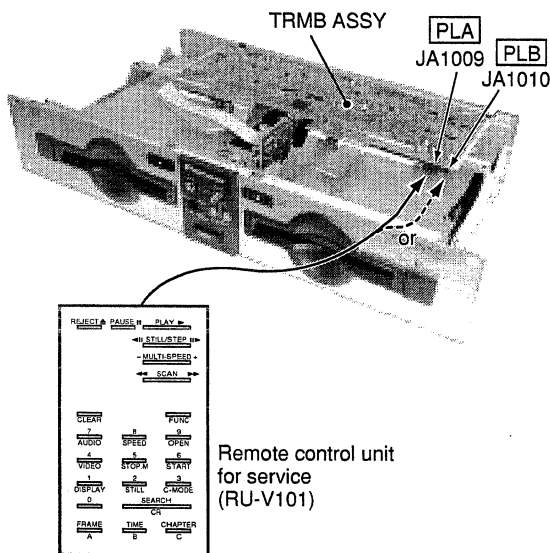
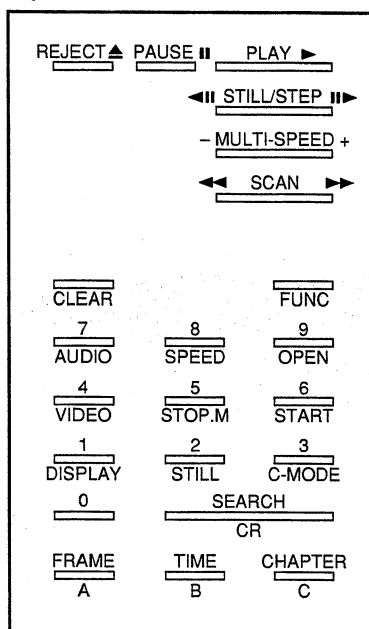


Fig. 3 Connection of the remote control unit for service

#### ● Function of the remote control unit for service (RU-V101)



|                    |   |                                           |
|--------------------|---|-------------------------------------------|
| REJECT             | : | stop                                      |
| PAUSE              | : | Pause                                     |
| PLAY               | : | Play                                      |
| STILL/STEP ►►      | : | 1 track FWD jump                          |
| STILL/STEP ◄◄      | : | 1 track REV jump                          |
| MULTI-SPEED +      | : | Multi FWD jump                            |
| MULTI-SPEED -      | : | Multi REV jump                            |
| SCAN ►►            | : | Not used                                  |
| SCAN ◄◄            | : | Not used                                  |
| CLEAR              | : | Clear                                     |
| FRAME              | : | Not used                                  |
| TIME               | : | Time set                                  |
| CHAPTER            | : | Track set                                 |
| SEARCH             | : | Search                                    |
| 10 key             | : | Numerical input                           |
| DISPLAY (FUNC + 1) | : | Not used                                  |
| STILL (FUNC + 2)   | : | Not used                                  |
| C-MODE (FUNC + 3)  | : | RF Level Adjustment                       |
| VIDEO (FUNC + 4)   | : | Not used                                  |
| STOP.M (FUNC + 5)  | : | Not used                                  |
| START (FUNC + 6)   | : | Search for first piece of music and pause |
| AUDIO (FUNC + 7)   | : | Track search                              |
| SPEED (FUNC + 8)   | : | Tempo                                     |
| OPEN (FUNC + 9)    | : | Disc eject                                |

#### (2) The function that can confirm (Player section)

Note: • ON side of DIGITAL OUT select switch on the Rear Panel is normal speed, and OFF side is fourfold speed.

• Show explanation about operation content of the remote control unit (RU-V101) for service and a state of the player.

1. Insert a DISC, and enter the play mode when pressing the PLAY button of the remote control unit in the state that there is a loading mechanism at the clamp position. (Both normal and fourfold speeds can confirm a sound.)
2. Search TRk No. when pressing the Trk (number) → FUNC → AUDIO button sequentially, and output a sound. (Both normal and fourfold speeds can confirm a sound.)
  - Only operation of steps 3 and 4 can perform when this operation was done.
  - When the operation after step 5 is done, eject a disc and insert it again.
3. When pressing the FUNC → OPEN button sequentially, eject the DISC.
4. When pressing the \* \* \* (number three columns of input) → SPEED button sequentially, tempo will be able to change. (only fourfold speed)

100-place is 0 : - (minus) or

1 : Specify + (plus)

Set the tempo by rest of two columns. (until ±16%)

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[Example]

101 → SPEED button : +1%

010 → SPEED button : -10%

116 → SPEED button : +16%

5. Play by pressing the PLAY button. (Confirmation by playback sound is possibly only in normal speed. Fourfold speed is no sound.)
6. Stop by pressing the REJECT button. (Stops the disk rotation, and servo is off.)
7. During plays, pause by pressing the FUNC → PAUSE button sequentially.
8. During plays, search the first piece and pause by pressing the FUNC → START button sequentially.
9. During plays, perform 1Tr JUMP FWD by pressing the right side of the STILL/STEP button.
10. During plays, perform 1Tr JUMP REW by pressing the left side of the STILL/STEP button.
11. During plays, perform the MULTI REV JUMP only the number that was specified by pressing the number → - (minus) side of MULTI•SPEED.
12. During plays, perform the MULTI FWD JUMP only the number that was specified by pressing the number → + (plus) side of SPEED/SPEED. (until 999 track jump)
  - When there is not number appointment, perform the 10 Tr FWD/REV JUMP.

13. Search for time appointment by pressing the TIME button → time appointment → SEARCH sequentially, then pause.

● How to set the time appointment: \* \* \* \* (four columns)

[Example]

When search for 50 minutes:

TIME button → 5000 (for 00 minutes 00 seconds) → SEARCH

● When pressing the SEARCH button without time appointment:

Search for two minutes ago of the disc end time and after two seconds of the disc start time whenever pressing the key.

[Example]

Time of DISC is 70 minutes. Search for 68 minutes before two minutes of disc end time whenever pressing the SEARCH button, and pause. ↔ Search for after two seconds of the playback start time of DISC, and pause.

14. Search for appointed Tr No. by pressing the CHAPTER button → Tr No. appointment (number) → SEARCH sequentially, then pause.

● When pressing the SEARCH button without time appointment:

Search for two minutes ago of the disc end time and after two seconds of the disc start time whenever pressing the key.

[Example]

Time of DISC is 70 minutes. Search for 68 minutes before two minutes of disc end time whenever pressing the SEARCH button, and pause. ↔ Search for after two seconds of the playback start time of DISC, and pause.

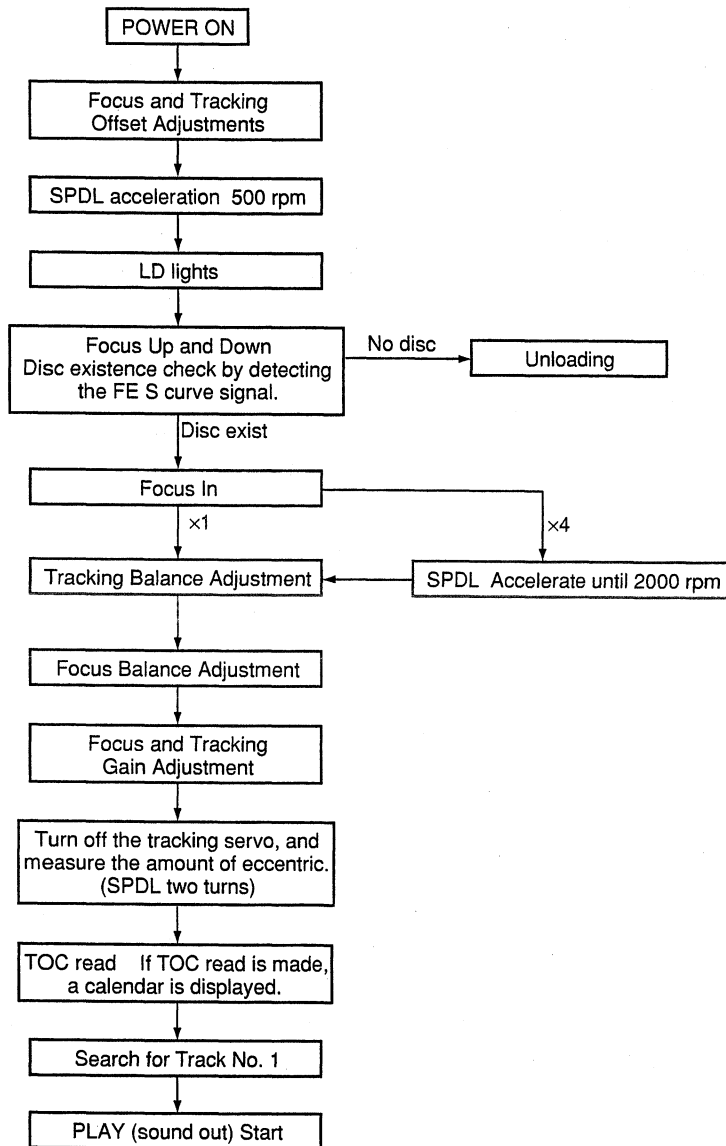
15. Enter the RF level adjustment mode by pressing the FUNC → C-MODE button sequentially. (Refer to 6. ADJUSTMENT.)
16. Cannot operate the following buttons of the remote control unit. VIDEO, STOP M., DISPLAY, STILL, FRAME and SCAN

### 7.1.1.4 Error Indication

When trouble occurred in movement of the player in normal use, indicate the error number in FL.

| Error Number | Error Name     | Contents                                                            | Cause Example                                 |
|--------------|----------------|---------------------------------------------------------------------|-----------------------------------------------|
| E-72 01      | TOC READ ERROR | Even if TOC data of a disc passed for 20 seconds, was not readable. | Disc is dirty.                                |
| E-83 01      | PLAYER ERROR   | Disc does not PLAY normally.<br>FOCUS NG                            | Disc is dirty.<br>There is crack on the disc. |
| E-83 02      | PLAYER ERROR   | DISC does not PLAY normally.<br>TRACKING NG                         | Disc is dirty.<br>There is crack on the disc. |
| E-83 03      | PLAYER ERROR   | DISC does not PLAY normally.<br>QDATA NG                            | Disc is dirty.<br>There is crack on the disc. |

### 7.1.2 POWER ON SEQUENCE

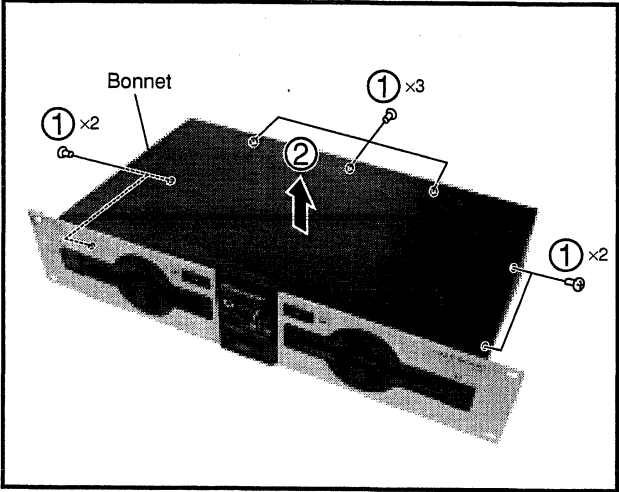


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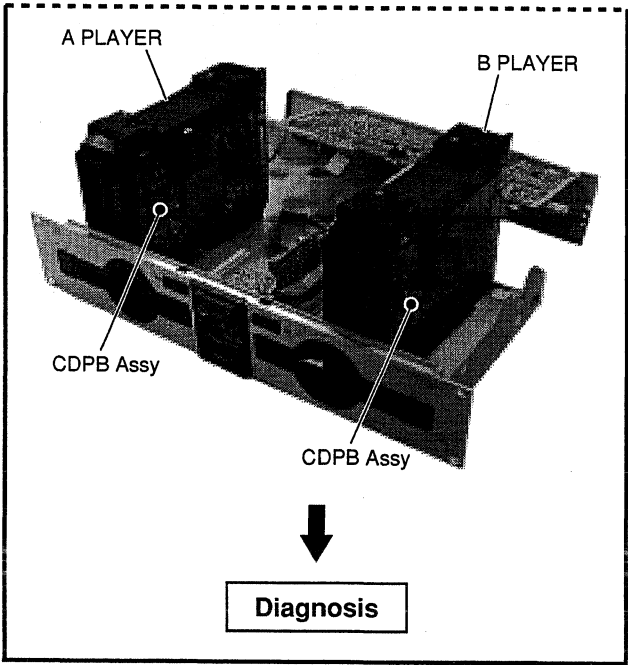
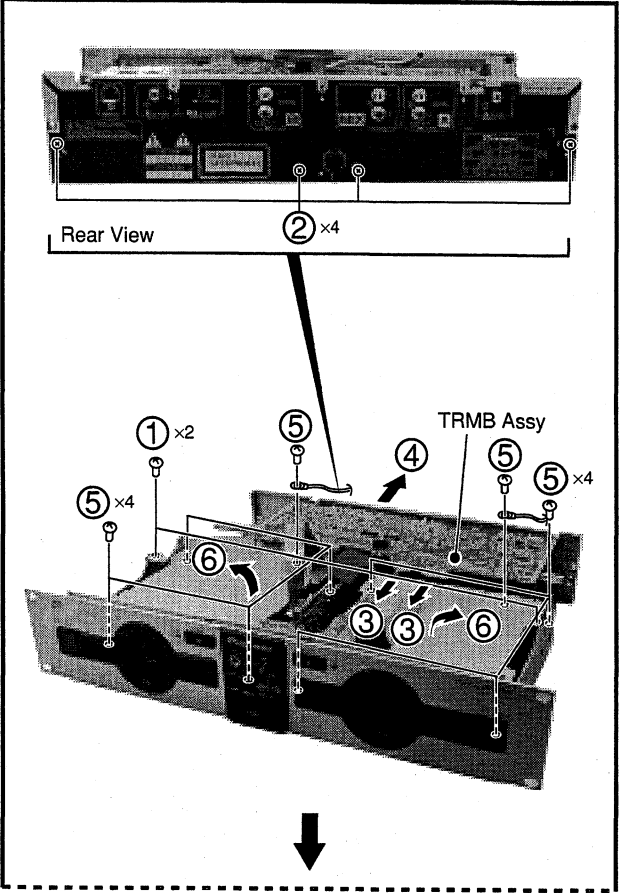
7.1.3 DISASSEMBLY

(1) CMX-5000

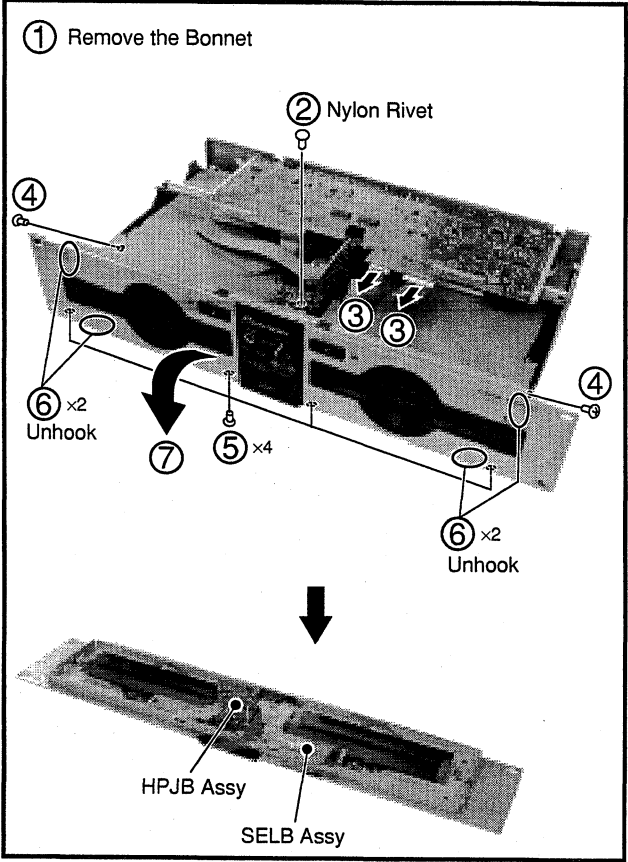
■ Bonnet



■ TRMB Assy - PLAYER Section



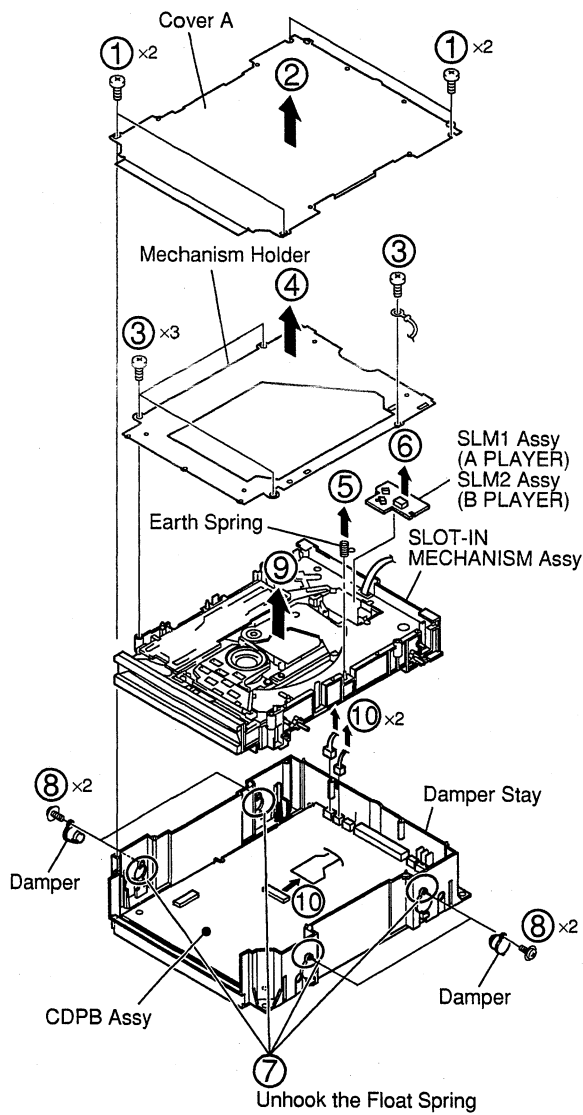
■ Front Panel Section





### ■ SLOT-IN MECHANISM Assy

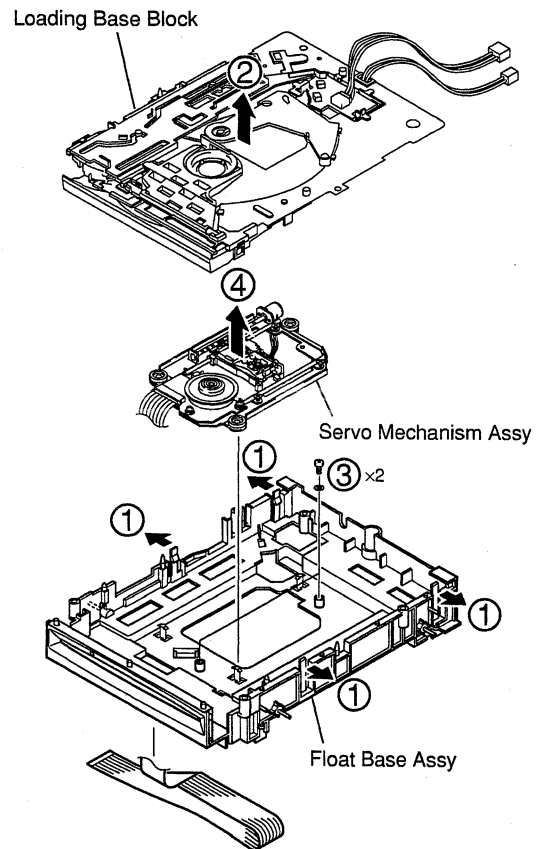
A procedure of B PLAYER is same as A PLAYER.



Note :  
CDPB Assy can diagnose from the backside.



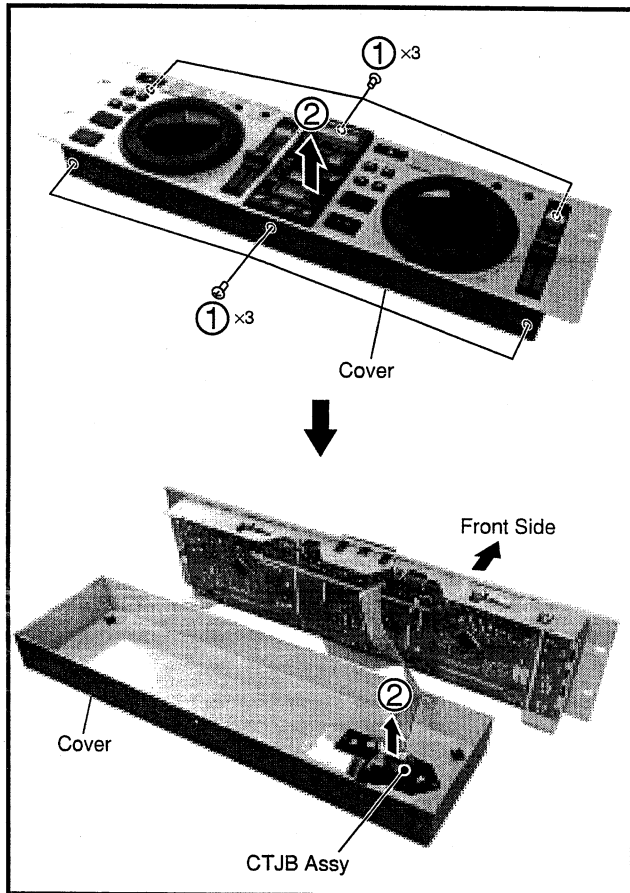
### ■ SERVO MECHANISM Assy



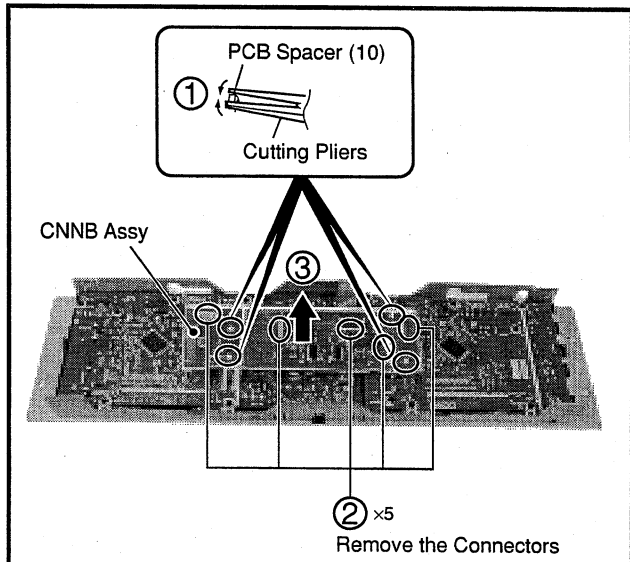
## CMX-5000, CU-V160

### (2) REMOTE CONTROLLER (CU-V160)

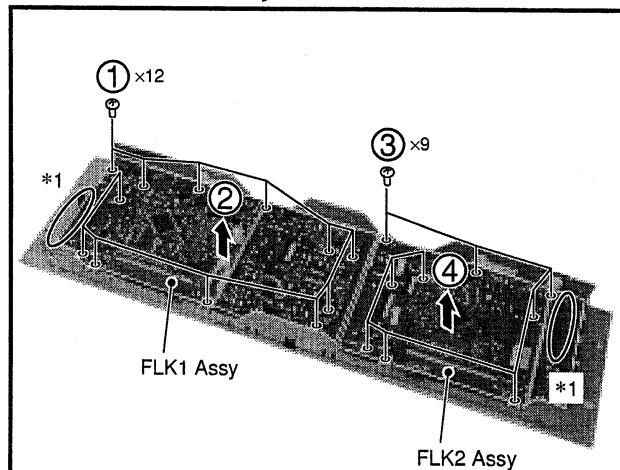
#### ■ Cover



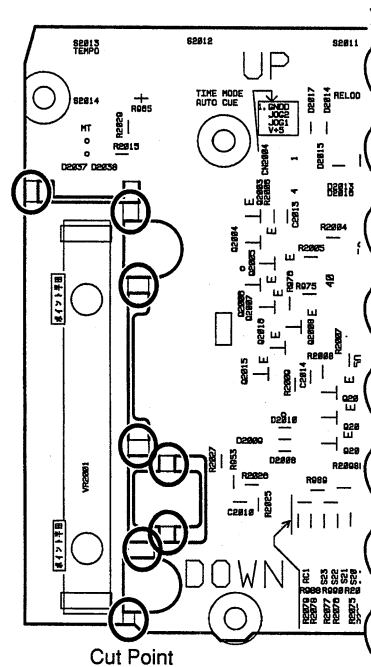
#### ■ CNNB Assy



#### ■ FLK1, FLK2 Assy



Note \*1 :  
When cuts PC Board with a nipper and replaced slide VR, positioning becomes invalid. Please aline it by visual inspection when installs it. (Refer to the following diagram.)



This illustration is FLK1 Assy.

## 7.2 PARTS

### 7.2.1 IC

• The information shown in the list is basic information and may not correspond exactly to that shown in the schematic diagrams.

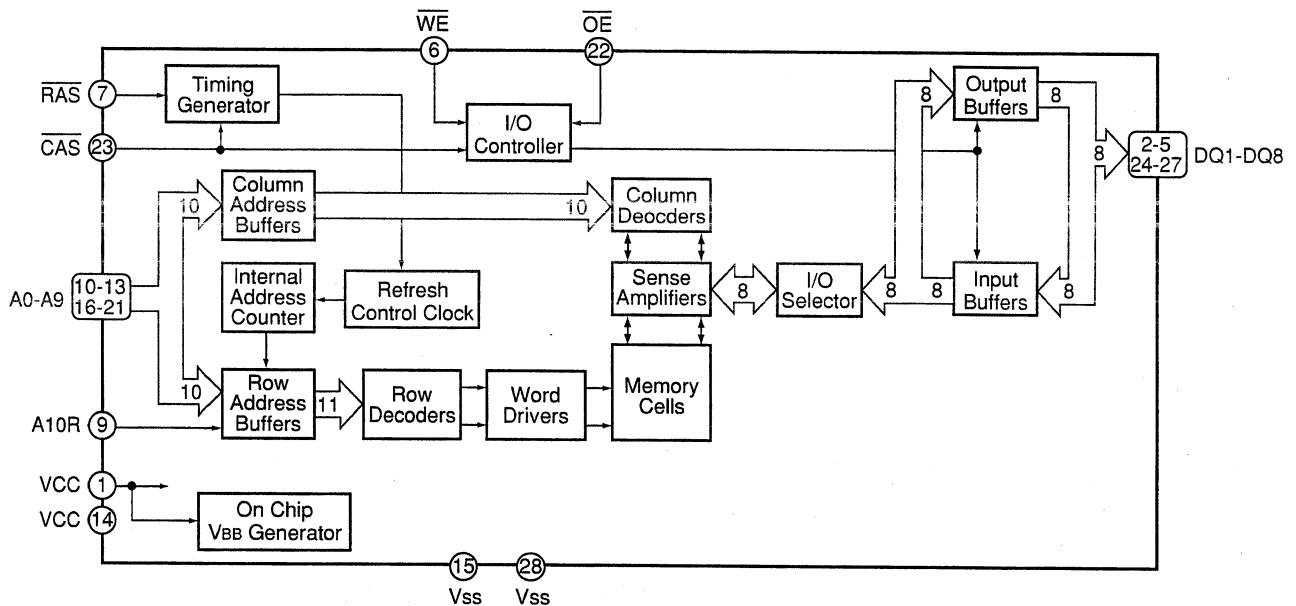
#### •List of IC

NSM51V17805D-60TS-K, GLT44016-40J4, PE9009A, TC74HC241AF

### ■ MSM51V17805D-60TS-K (CDPB ASSY : IC302)

• 16M DRAM with EDO

#### ● Block Diagram



#### ● Pin Function

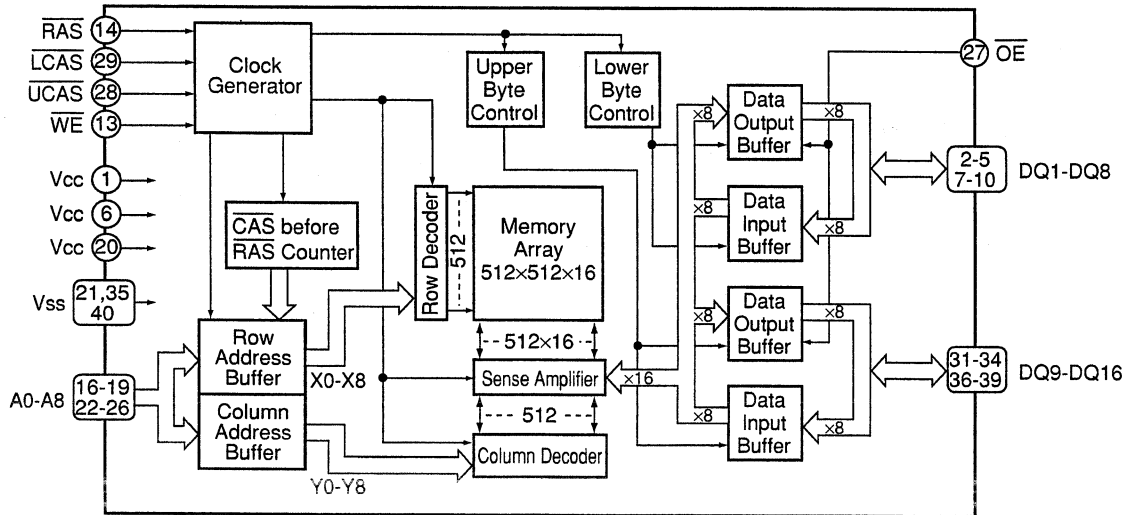
| No. | Pin Name | Pin Function           | No. | Pin Name | Pin Function           |
|-----|----------|------------------------|-----|----------|------------------------|
| 1   | VCC      | Power supply (3.3V)    | 15  | VSS      | Ground (0V)            |
| 2   | DQ1      | Data input/Data output | 16  | A4       | Address input          |
| 3   | DQ2      |                        | 17  | A5       |                        |
| 4   | DQ3      |                        | 18  | A6       |                        |
| 5   | DQ4      |                        | 19  | A7       |                        |
| 6   | WE       | Write enable           | 20  | A8       |                        |
| 7   | RAS      | Row address strobe     | 21  | A9       | Output enable          |
| 8   | NC       | Non connection         | 22  | OE       |                        |
| 9   | A10R     | Address input          | 23  | CAS      | Column address strobe  |
| 10  | A0       |                        | 24  | DQ5      | Data input/Data output |
| 11  | A1       |                        | 25  | DQ6      |                        |
| 12  | A2       |                        | 26  | DQ7      |                        |
| 13  | A3       | Power supply (3.3V)    | 27  | DQ8      | Ground (0V)            |
| 14  | VCC      |                        | 28  | VSS      |                        |

## CMX-5000, CU-V160

### ■ GLT44016-40J4 (CDPB ASSY : IC902)

• 256k X 16 CMOS Dynamic RAM

#### ● Block Diagram



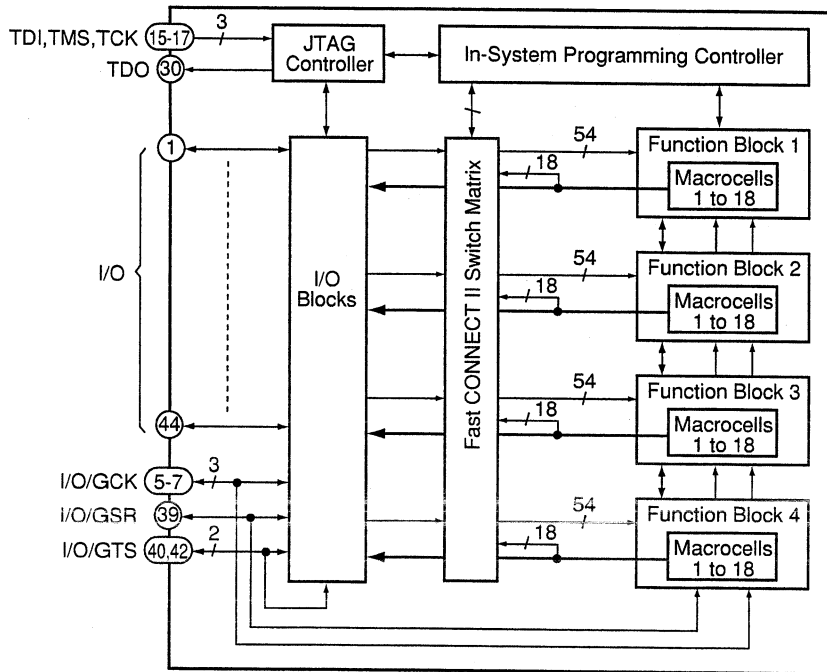
#### ● Pin Function

| No. | Pin Name | Pin Function          | No. | Pin Name | Pin Function                             |
|-----|----------|-----------------------|-----|----------|------------------------------------------|
| 1   | VCC      | +5V power supply      | 21  | Vss      | Ground                                   |
| 2   | DQ1      | Data inputs / Outputs | 22  | A4       | Address inputs                           |
| 3   | DQ2      |                       | 23  | A5       |                                          |
| 4   | DQ3      |                       | 24  | A6       |                                          |
| 5   | DQ4      |                       | 25  | A7       |                                          |
| 6   | VCC      | +5V power supply      | 26  | A8       |                                          |
| 7   | DQ5      | Data inputs / Outputs | 27  | OE       | Output enable                            |
| 8   | DQ6      |                       | 28  | UCAS     | Column address strobe/Upper byte control |
| 9   | DQ7      |                       | 29  | LCAS     | Column address strobe/Lower byte control |
| 10  | DQ8      |                       | 30  | NC       | No connection                            |
| 11  | NC       | No connection         | 31  | DQ9      | Data inputs / Outputs                    |
| 12  | NC       | No connection         | 32  | DQ10     |                                          |
| 13  | WE       | Write enable          | 33  | DQ11     |                                          |
| 14  | RAS      | Row address strobe    | 34  | DQ12     |                                          |
| 15  | NC       | No connection         | 35  | Vss      | Ground                                   |
| 16  | A0       | Address inputs        | 36  | DQ13     | Data inputs / Outputs                    |
| 17  | A1       |                       | 37  | DQ14     |                                          |
| 18  | A2       |                       | 38  | DQ15     |                                          |
| 19  | A3       |                       | 39  | DQ16     |                                          |
| 20  | VCC      | +5V power supply      | 40  | Vss      | Ground                                   |

■ PE9009A (CDPB ASSY : IC402)

- In-System Programming (ISP) CPLD

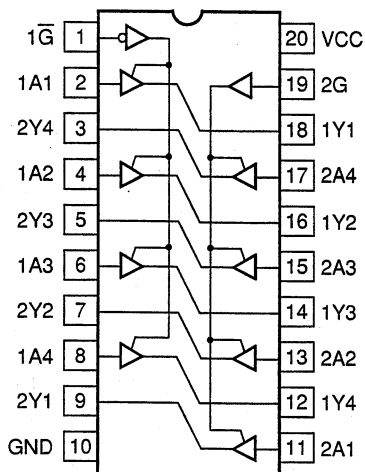
● Block Diagram



■ TC74HC241AF (TRMB ASSY : IC1004)

- Octal Bus Buffer

● Pin Assignment (Top view)

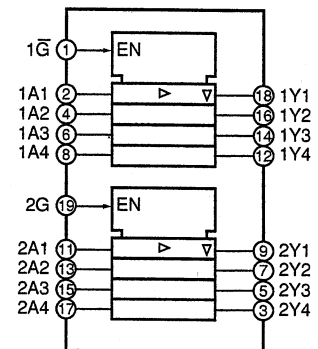


● Truth Table

| INPUTS |    | OUTPUTS |
|--------|----|---------|
| G      | An | Yn      |
| H      | L  | L       |
| H      | H  | H       |
| L      | X  | Z       |

X : Don't care  
Z : High impedance

● IEC Logic Symbol

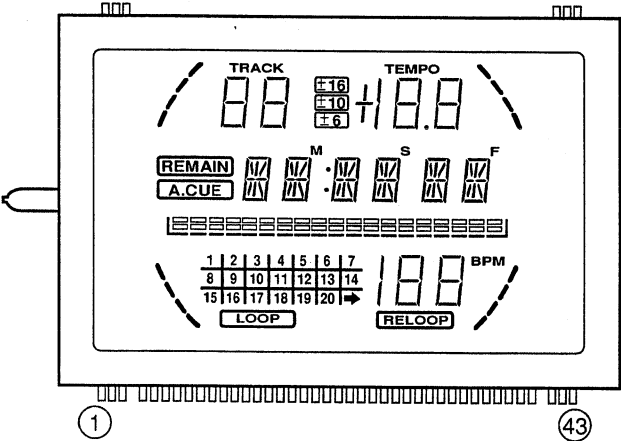


CMX-5000, CU-V160

7.2.2 DISPLAY

■ DEL1033 (FLKY1 ASSY: V2001, FLKY2 ASSY: V2101)

- FL Display
- Pin Assignment



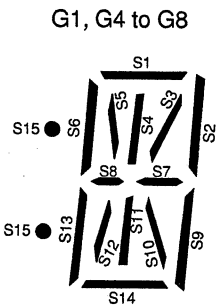
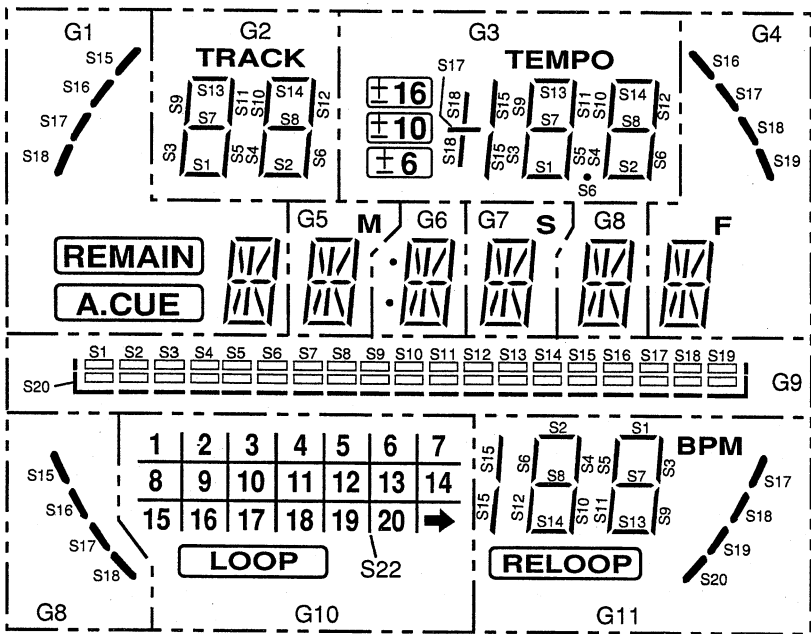
● Pin Connection

| Pin No.    | 1          | 2          | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12 | 13 | 14  | 15  | 16 | 17 | 18 | 19 | 20 | 21 | 22 |
|------------|------------|------------|----|----|----|----|----|----|----|----|----|----|----|-----|-----|----|----|----|----|----|----|----|
| Assignment | NL<br>(F1) | NL<br>(F1) | F1 | NP | G1 | G2 | G3 | G4 | G5 | G6 | G7 | G8 | G9 | G10 | G11 | NL | S1 | S2 | S3 | S4 | S5 | S6 |

| Pin No.    | 23 | 24 | 25 | 26  | 27  | 28  | 29  | 30  | 31  | 32  | 33  | 34  | 35  | 36  | 37  | 38  | 39  | 40 | 41 | 42         | 43         |
|------------|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|------------|------------|
| Assignment | S7 | S8 | S9 | S10 | S11 | S12 | S13 | S14 | S15 | S16 | S17 | S18 | S19 | S20 | S21 | S22 | S23 | NP | F2 | NL<br>(F2) | NL<br>(F2) |

F1, F2 : Filament, G1 - G11 : Grid, S1 - S23 : Anode, NP : No Pin, NL : No Lead

● Anode and Grid Assignment



● Anode and Grid Assignment

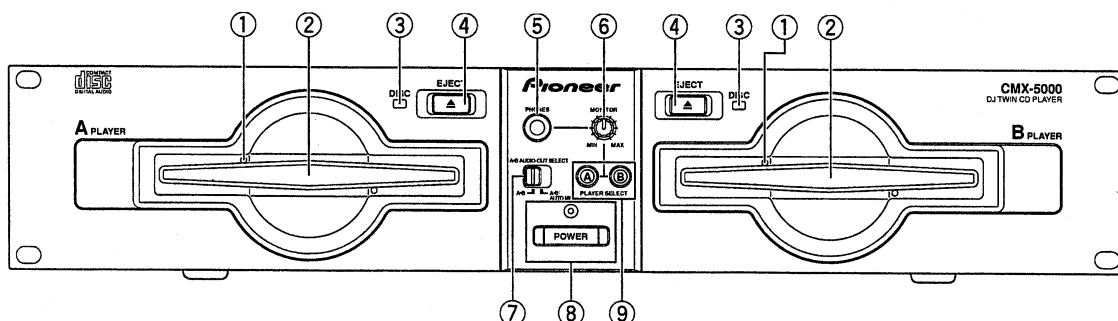
|     | G1     | G2    | G3    | G4    | G5    | G6    | G7    | G8    | G9    | G10  | G11    |
|-----|--------|-------|-------|-------|-------|-------|-------|-------|-------|------|--------|
| S1  | S1     | S1    | S1    | S1    | S1    | S1    | S1    | S1    | S1    | 1    | S1     |
| S2  | S2     | S2    | S2    | S2    | S2    | S2    | S2    | S2    | S2    | 2    | S2     |
| S3  | S3     | S3    | S3    | S3    | S3    | S3    | S3    | S3    | S3    | 3    | S3     |
| S4  | S4     | S4    | S4    | S4    | S4    | S4    | S4    | S4    | S4    | 4    | S4     |
| S5  | S5     | S5    | S5    | S5    | S5    | S5    | S5    | S5    | S5    | 5    | S5     |
| S6  | S6     | S6    | S6    | S6    | S6    | S6    | S6    | S6    | S6    | 6    | S6     |
| S7  | S7     | S7    | S7    | S7    | S7    | S7    | S7    | S7    | S7    | 7    | S7     |
| S8  | S8     | S8    | S8    | S8    | S8    | S8    | S8    | S8    | S8    | 8    | S8     |
| S9  | S9     | S9    | S9    | S9    | S9    | S9    | S9    | S9    | S9    | 9    | S9     |
| S10 | S10    | S10   | S10   | S10   | S10   | S10   | S10   | S10   | S10   | 10   | S10    |
| S11 | S11    | S11   | S11   | S11   | S11   | S11   | S11   | S11   | S11   | 11   | S11    |
| S12 | S12    | S12   | S12   | S12   | S12   | S12   | S12   | S12   | S12   | 12   | S12    |
| S13 | S13    | S13   | S13   | S13   | S13   | S13   | S13   | S13   | S13   | 13   | S13    |
| S14 | S14    | S14   | S14   | S14   | S14   | S14   | S14   | S14   | S14   | 14   | S14    |
| S15 | S15    | TRACK | S15   | F     | M     | S15   | S     | S15   | S15   | 15   | S15    |
| S16 | S16    | _____ | S16   | S16   | _____ | _____ | _____ | S16   | S16   | 16   | BPM    |
| S17 | S17    | _____ | S17   | S17   | _____ | _____ | _____ | S17   | S17   | 17   | S17    |
| S18 | S18    | _____ | S18   | S18   | _____ | _____ | _____ | S18   | S18   | 18   | S18    |
| S19 | REMAIN | _____ | ±16   | S19   | _____ | _____ | _____ | _____ | S19   | 19   | S19    |
| S20 | A. CUE | _____ | ±10   | _____ | _____ | _____ | _____ | _____ | S20   | 20   | S20    |
| S21 | _____  | _____ | ±6    | _____ | _____ | _____ | _____ | _____ | _____ | ⇒    | RELOOP |
| S22 | _____  | _____ | TEMPO | _____ | _____ | _____ | _____ | _____ | _____ | S22  | _____  |
| S23 | _____  | _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ | LOOP | _____  |

## CMX-5000, CU-V160

# 8. PANEL FACILITIES AND SPECIFICATIONS

## 8.1 PANEL FACILITIES

### Player



① Manual ejection hole

② Disc insertion slot

When using 3 inch/8 cm discs, discs must be inserted in the commercially available CD adapter before insertion.

③ Disc loading indicator (DISC)

This indicator flashes when a disc is being inserted into or ejected from the disc insertion slot and lights up when a disc has been inserted.

④ Eject button (EJECT ▲)

Pressing this button while cueing is on standby or play is paused will eject the disc from the player.

⑤ Headphone jack (PHONES)

⑥ Headphone volume (MONITOR)

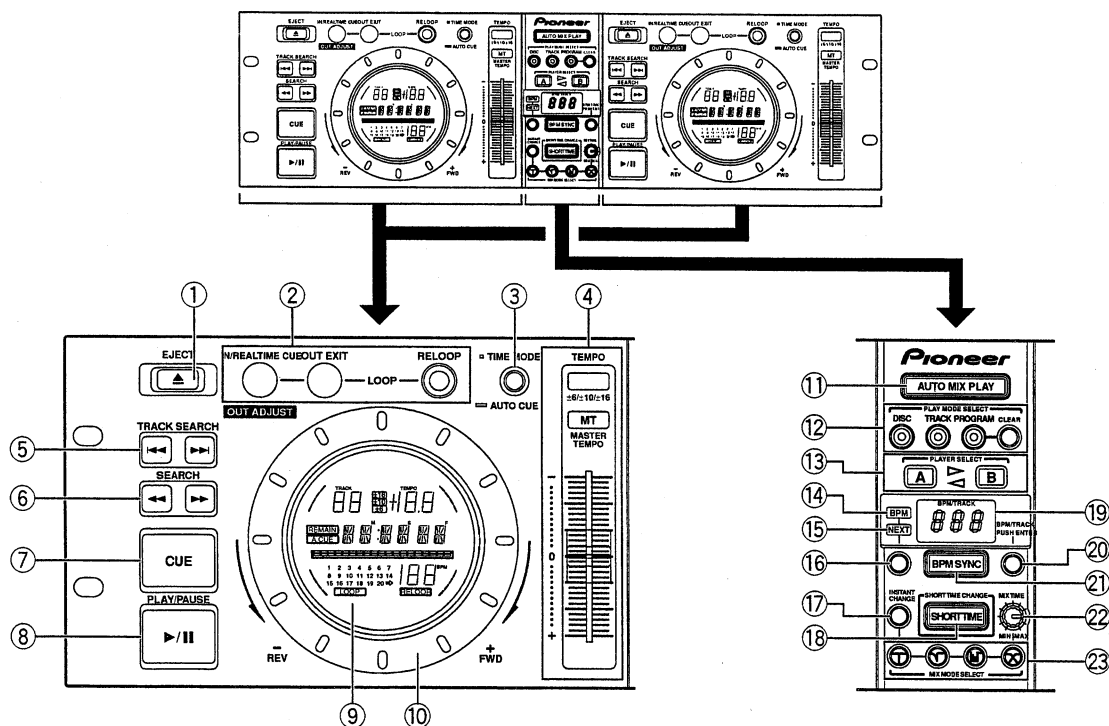
⑦ Audio output select switch (A/B AUDIO OUT SELECT)

Used to switch between A and B audio output.

⑧ Power switch (POWER) and indicator

⑨ Monitor select button (PLAYER SELECT)

### Remote control unit



① Eject button (EJECT ▲)

② Loop control button (LOOP)

③ Time mode/Auto cueing button (TIME MODE/AUTO CUE)

**TIME MODE:**

Pressing this button causes the elapsed time and remaining time (REMAIN) of the current track to be displayed in succession on the time display of the display unit.

- When unit is first powered on, time displayed consists of remaining time.

**AUTO CUE:**

- When unit is first powered on, auto cueing is set to on.

④ Tempo controls (TEMPO)

**Tempo control range button ( $\pm 6$ ,  $\pm 10$ ,  $\pm 16$ ):**

Pressing this button causes the variable range of the tempo adjustment knob to change each time the button is pressed.

## Display Section

- Variable range is set to  $\pm 10\%$  when power to the unit is first turned on.

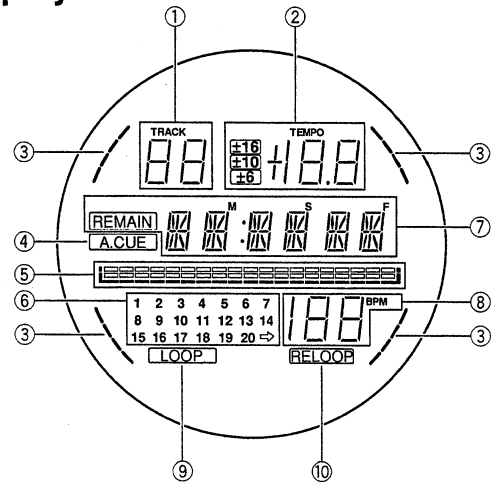
### Master tempo button (MASTER TEMPO) and indicator:

Pressing this button causes the master tempo feature to be powered on or off each time it is pressed.

### Tempo control slide:

Moving this dial in the positive (+) direction away from the center position (normal playback tempo) causes the tempo to become faster, and moving it in the negative (-) direction causes the tempo to become slower.

- ⑤ **Track search button (TRACK SEARCH ◀▶)**
- ⑥ **Search button (SEARCH ◀▶)**
- ⑦ **Cue button (CUE) and indicator**  
Cueing point settings  
Cueing point sampler  
Back cueing  
Cueing point adjust
- ⑧ **Play/Pause button (PLAY ▶/PAUSE II) and indicator**
- ⑨ **Display**
- ⑩ **Jog dial (+ FWD/- REV)**
- ⑪ **Auto mix play button (AUTO MIX PLAY) and indicator**  
Pressing this button causes auto mixing to be turned on or off each time it is pressed.
- ⑫ **Play mode select button (PLAY MODE SELECT)**  
This button is used to select the auto mixing play mode and to specify program settings.
- ⑬ **Player select button (PLAYER SELECT) and indicator**  
This button is used to select discs when using auto mixing.
- ⑭ **BPM indicator**
- ⑮ **NEXT indicator**
- ⑯ **BPM/NEXT button**
- ⑰ **Instant change button (INSTANT CHANGE) and indicator**
- ⑱ **Short time change button (SHORT TIME) and indicator**  
Pressing this button causes short time changing to be turned on or off each time it is pressed.
- ⑲ **BPM/TRACK display (BPM/TRACK)**  
This display is used to display the track number and BPM when using auto mixing or preprogrammed program settings.
- ⑳ **BPM/TRACK dial (BPM/TRACK, PUSH ENTER)**  
This dial is used to switch between different BPM values when using BPM synchro playback and to select and confirm track numbers when playing in program mode.  
\* Press down on the dial after making a selection to confirm your choice. (Note that this does not include the switching of BPM settings.)
- ㉑ **BPM synchro button (BPM SYNC)**  
When BPM SYNC is turned on (i.e., when the BPM SYNC button is lit), the tempo will be automatically changed so that the number of beats per minute matches between tracks mixing into each other. Pressing this button causes the BPM synchro count feature to be turned on or off each time it is pressed.
- ㉒ **Mix time control dial (MIX TIME)**  
This dial is used to specify the mixing time when using the mix button to perform cross fade mixing.
- ㉓ **Mix mode selection button (MIX MODE SELECT) and indicator**  
This button is used to select cut-in, zip, echo or cross fade mixing as the type of mixing to be used when segueing between tracks.



- ① **Track number display**  
Displays the track number of the track currently being played.
- ② **Playback speed display**  
**Tempo control range display ( $\pm 6, \pm 10, \pm 16$ )**  
Displays the variable range mode specified using the tempo control slide.  
**Tempo change rate display**  
Displays the rate of change of the tempo as specified using the tempo control slide.
- ③ **Auto mixing playback player display**  
The display on the side of the player currently in operation will flash.
- ④ **Auto cueing indicator (A. CUE)**  
Lights up when auto cueing is turned on.
- ⑤ **Playback position display**  
Used to display a full-scale bar graph for the track being played to make it possible to get an intuitive feel of the elapsed and remaining play time.
  - Display as it appears when displaying elapsed time:  
All indicators unlit and then indicators light up in sequence from left
  - Display as it appears when displaying remaining time:  
All indicators lit and then indicators are turned off in sequence from left
  - Display as it appears when there are less than 30 seconds remaining in a track: Slow flashing
  - Display as it appears when there are less than 15 seconds remaining in a track: Rapid flashing
- ⑥ **Track number calendar display**  
The number corresponding to the track currently being played is lit. The right-facing arrow is lit for tracks with a track number of 21 or higher.  
Programmed track numbers are lit, and the light for each number for tracks which have already been played are turned off once the tracks are played.
- ⑦ **Time display**  
Used to display the elapsed playback time (when the remain indicator is unlit) or the remaining playback time (when the remain indicator is lit) of the current track in minutes (M), seconds (S), and frames (F). Note that the amount of time remaining is displayed by default when the power is first turned on.
- ⑧ **BPM display**  
Used to display the number of BPM for the current track. Note that depending on the track there may be times when the BPM counter is unable to count the number of BPM.
- ⑨ **Looping indicator (LOOP)**  
Lights up when playing back in loop mode.
- ⑩ **Relooping indicator (RELOOP)**  
Lights up when recording a loop.

# CMX-5000, CU-V160

## 8.2 SPECIFICATIONS

### 1. General

|                                                |                                             |
|------------------------------------------------|---------------------------------------------|
| System .....                                   | Compact disc digital audio system           |
| Discs used.....                                | Compact discs                               |
| Power requirements .....                       | AC 120 V, 60 Hz                             |
| Power consumption.....                         | 40 W                                        |
| Operating temperature .....                    | +5°C to +35°C (+41°F to +95°F)              |
| Operating humidity .....                       | 5% to 85%                                   |
| (There should be no condensation of moisture.) |                                             |
| Weight                                         |                                             |
| Remote controller .....                        | 2.1 kg (4 lbs 10 oz)                        |
| Player .....                                   | 5.4 kg (11 lbs 15 oz)                       |
| Dimensions                                     |                                             |
| Remote controller .....                        | 482 (W) x 73 (D) x 132 (H) mm               |
|                                                | 18-31/32 (W) x 2-7/8 (D) x 5-3/16 (H) in.   |
| Player .....                                   | 482 (W) x 268 (D) x 90 (H) mm               |
|                                                | 18-31/32 (W) x 10-9/16 (D) x 3-9/16 (H) in. |

### 2. Audio section

|                             |                |
|-----------------------------|----------------|
| Frequency response .....    | 4 Hz to 20 kHz |
| Signal-to-noise ratio ..... | 115 dB or more |
| Distortion rate .....       | 0.006%         |

### 3. Accessories

|                                                            |   |
|------------------------------------------------------------|---|
| ● Operating instructions.....                              | 1 |
| ● Audio cable .....                                        | 2 |
| ● Control cord .....                                       | 2 |
| ● Forced ejection pin .....                                | 1 |
| ● Specialized connection cable for the remote controller . | 1 |
| ● Limited warranty .....                                   | 1 |

**NOTE:**  
Specifications and design are subject to possible modification without notice.